

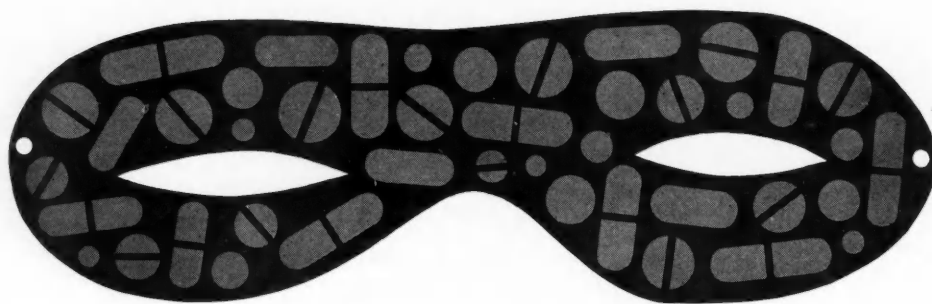
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drugs anonymous

One of the several hastily conceived and potentially dangerous suggestions for reducing drug costs is generic-name prescribing. The proponents of generic-name prescribing claim that it will lower drug costs significantly and—through supervision by the Federal Government—provide quality equivalent to that of trademarked drugs. We maintain that these claims are false. Here are some authoritative answers to the principal questions posed by generic-name prescribing.

How much money would be saved if all prescriptions were written for generic-name drugs?

"The [Rhode Island] Division of Public Assistance examined 10,000 drug prescriptions for welfare recipients for the purpose of determining the actual savings . . . of generic versus trade-name drugs. The drugs had cost \$28,000. Substituting generic drugs whenever possible would have provided a saving of less than 5 per cent. Syracuse has made a similar study of drug costs with comparable results."

Rhode Island Medical Journal,
January, 1961

Are the savings worth the risk of sacrificing quality?

"... it is unsafe [to prescribe generically] because there is not sufficient policing of our standards. . . ."

Lloyd C. Miller, Ph. D.
Director of Revision of the U.S.P.

"The naive belief that, if a product was not good, the FDA would prohibit its sale is just not realistic. . . . it is completely impossible for the FDA to check every batch of every product of every manufacturer. . . . Hence the integrity and reputation of the manufacturer assume unusual significance where drugs and health products are concerned."

Albert H. Holland, M.D.
formerly Medical Director of the
Food and Drug Administration

Smith Kline & French Laboratories, Philadelphia



California M E D I C I N E

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Headache

Pharmacological Approach to Treatment

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MORE DRUGS for the treatment of headache have become available to physicians in the past ten years than in all the previous history of American medicine. This flood of new drugs has resulted from progress in pharmacological research and from increased knowledge of the basic mechanisms of head pain. Yet from a critical review of the literature it appears that the number and the effectiveness are not closely related. On the contrary, the very fact that more than 400 drugs have been offered for the treatment of migraine seems more a measure of shortcomings than of successful therapy.

The purpose of this presentation is (1) to consider criteria and basic principles for clinical evaluation of drugs and (2) to evaluate some of the drugs recently introduced in the treatment of vascular and muscular contraction headaches, which constitute over 90 per cent of the headaches the physician will treat in his office.

Criteria and Basic Principles

In evaluating the treatment of headache by pharmacological methods, a number of factors are difficult to control. Headache as a symptom is a subjective response, evident only to the individual experiencing it. The appraisal of therapy depends

• The great majority of headaches a physician treats in office practice can be divided into two main categories, muscular contraction headache of tension type and vascular headaches of the migraine type.

The most satisfactory symptomatic therapy for tension headache is by the use of a nonnarcotic analgesic agent combined with a tranquilizer or sedative. On the other hand, symptomatic relief of migraine is best obtained by the use of a suppository of ergotamine tartrate and caffeine combined with an antiemetic or antispasmodic.

Interval treatment of patients with tension and migraine headache centers on helping the patient understand his emotional problems. Prophylactic drug therapy for patients with tension headache includes the limited use of tranquilizers and sedatives. Recently, striking benefits in some patients with migraine have been achieved by the prophylactic use of the antiserotonin drug methysergide (UML 491).

upon a cooperative statement made by the subject. Moreover, there are three areas in which effect of the drug must be considered: (1) The original pain sensation and its mechanism; (2) the anxiety associated with the pain, and (3) the secondary increase in dysfunction, including the additional pain sensation which accompanies the anxiety.

Response to any therapy will be affected by the patient-physician relationship. In my experience, the pharmacological effect of sedatives, tranquilizers and analgesics is decidedly influenced by the

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physician's ability to relieve the patient's anxiety. Response to a remedy also depends upon the psychological status of the patient, whose attitude may range from constructive to cynical. The physician's attitude toward the drug being administered influences the results: the therapeutic enthusiast always does better than the therapeutic nihilist. It also must be emphasized that the physician's understanding of the pharmacologic action of the drug being used, including such parameters of a drug as mode of administration, dosage, number of doses and frequency of administration have pronounced effect on the results of treatment.

Unfortunately the observations made by inducing headache for experimental purposes and then appraising the results of chemical agents on the symptoms, are not as reliable as observations of the treatment of spontaneous headache. Consequently, despite the difficulties, clinical use in the treatment of patients is the only way to make a valid test of the value of any drug in the treatment of headache.

Method of Drug Evaluation

Evaluation of both symptomatic and prophylactic therapeutic agents for headache requires a comparison of groups of patients taken at random. Essential parts of the investigation are double-blind techniques including a placebo and standard drug of reference for comparison; also standardization of order, correlated data, mathematical validation of difference, and appraisal of side effects. Studies of this type are difficult from two standpoints: patient material and the investigator's time.

It is my belief that new compounds must be more than simply helpful; to be considered of real value they must prove superior to other established drugs. However, other investigators believe that any drug capable of helping in any way is valuable—this on the grounds that in many instances it is not possible to evaluate drugs under the ideal criteria but it is possible that their usefulness may be established by giving them to many patients over a long period.

Placebo Effect

In the appraisal of drugs intended to alter subjective responses such as head pain, the placebo deserves especial attention. It is important to remember that placebo effects are not imaginary, and that virtually all organs are capable of responding to placebos. The placebo derives its power from the fact that the administration of it is meaningful for the patient. Objective laboratory tests have shown that placebos can stimulate the adrenal glands and mimic drug action.² This action is thus not necessarily only a psychological one. It also should be emphasized that response to a placebo in one situation may be quite different from the response in another. Individual attitudes and reactions to treat-

ment vary enormously from patient to patient and even with the same patient from time to time and cannot be precisely duplicated.

Clinical Use of Pharmacological Therapy

Headache is a symptom and not a disease. The goals in pharmacotherapy are to interrupt the mechanism that produces the pain, to raise the pain threshold and to reduce the emotional tension and anxiety responsible for or associated with the pain. Prevention of headache is difficult but control of the attack of pain is usually successful. The small minority of headaches secondary to a specific acute illness are treated through control of the primary pain and correction of the underlying disorder. The great majority of headaches are psychophysiological responses involving cranial arterial dilatation or muscular contraction without any structural changes. It is with this group that this communication deals. Management of the patient should be considered from two aspects, prophylactic and symptomatic.

Vascular Headache of the Migraine Type

Migraine is a symptom complex consisting of periodic, recurrent, commonly unilateral headache, often associated with anorexia, nausea and vomiting and having a variety of prodromal symptoms, including visual disturbances. Frequently a history of similar headache in the parents or other members of the family is noted. Although headache is the most prominent feature of migraine, the syndrome may manifest itself in widespread derangement of bodily function, including mood disturbances.⁸

The painful phase of migraine is associated with vasodilatation, during which the cranial vessels show altered sensitivity and increased amplitude of pulsation. Recent studies indicated that the sensitivity of the blood vessels is in part due to the accumulation of a substance of low molecular weight (neurokinin), which may be responsible for lowering the pain threshold.¹

For convenience of diagnosis and treatment, migraine headaches can be divided into the following categories:⁴

- (a) Vascular headache in which prodromata—visual, sensory or motor—are sharply defined neurological phenomena ("classical migraine").
- (b) Vascular headache in which pronounced cephalic autonomic phenomena occur with the head pain in a cluster pattern ("cluster migraine").
- (c) Vascular headache without striking prodromata and less well defined variable features ("ordinary migraine").
- (d) Vascular headache accompanied by major neurological phenomena which persist during and after the headache ("ophthalmoplegic migraine," "hemiplegic migraine").

Symptomatic Treatment of Migraine

The most effective drug in the treatment of an attack of vascular headache of the migraine type is ergotamine, which provides an excellent example of affording relief for head pain without any direct analgesic effect. The beneficial effect of ergotamine administration probably depends on its action on the smooth muscles of the blood vessels, causing a constriction of these vessels, as well as on its central action. Its effectiveness in migraine therapy has further been improved by combining it with caffeine to potentiate its action and with other compounds to reduce its side effects and to control other symptoms associated with the migraine attack. Many forms of ergotamine derivatives are now available in proprietary preparations incorporating antispasmodics, sedatives and antiemetics to suit the individual patient's need. The drug can be given by inhalation or by sublingual, oral, rectal or parenteral routes. In ordinary and classical migraine, rectal suppositories combining ergotamine with caffeine and an antispasmodic have proven most effective. In cluster headache, because of its transitory nature, the best results are usually obtained with ergotamine or dihydroergotamine used parenterally or by the aerosol inhalation of ergotamine. The use of antiemetics such as Compazine® (prochlorperazine) or Marezine® (cyclizine hydrochloride) is very helpful in the prevention of nausea caused by the drug and headache.

The importance of administering the medication early in the course of an attack, and giving it in adequate doses, cannot be overestimated. Many therapeutic failures are ascribable to too small a dosage given too late. Many errors in therapy are owing to lack of knowledge of how to use the drug—from undue fears of its danger on the one hand to recklessness in its administration on the other. However, the physiologic effects of ergot are exceedingly variable from person to person. Even in the same patient the way the body deals with the drug varies with certain physiologic states of the responding tissues. For example, the rate of disintegration of an ergotamine tablet—or even the rate at which the drug gains access to the circulation—is not necessarily compatible with the effectiveness of this chemical agent in the treatment of migraine. Although the site of action is both peripheral and central, little is known of the fate and excretion of ergot alkaloids. Furthermore, many of the side effects of ergotamine are probably referable to the central nervous system, and the route of administration would have little effect on them.

Because of its powerful vasoconstrictor action, ergotamine should not be used in patients who have or are suspected to have peripheral, cerebral or coronary vascular disease of venous or arterial ori-

TABLE 1.—Anti-Serotonin Activity in Vivo in Relation to Clinical Efficacy as Migraine Prophylaxis

Compound	Inhibition of Serotonin-induced Edema in the Rat's Paw		Relative Clinical Effect (Range, 0 to 4+)
	E. D. 50 mcg./kg.	Relative Value*	
1. Hydergine	833	7	+
2. BOL 148†	196	29	+
3. Cyproheptadine ..	26	150	++
4. UML-491 (methysergide) ..	13	440	++++

*LSD-25 = 100.

†D-2-Brom-lysergic acid diethylamide tartrate

gin. It is also contraindicated in patients with liver disease, renal damage, hypertension, pregnancy or septic states and in cachectic patients.

In the late stages of migraine attack, analgesic and sedatives are sometimes helpful if the headache has persisted long enough for the vessels to become firm and tortuous. In an occasional patient, relief is secured from an acute attack by inhalation of 100 per cent oxygen, by the administration of injectable Dramamine® (dimenhydrinate) or even by local infiltration of the affected artery by procaine. Efforts to abort "classical" migraine at the onset of aura by the use of nitroglycerin, carbon dioxide, nicotinic acid or other vasodilating agents have not been successful.

Prophylactic Treatment of Migraine

In appraisal of a prophylactic chemical agent in the treatment of migraine, it is well to note that we can be misled by the natural history of the disorder, particularly by the unpredictable remissions which can last for months or even years. Attempts to lessen the frequency of attacks of migraine in over 1600 patients by pharmacotherapy were made in previous studies.⁹ The frequency and/or severity of the attacks was decreased significantly in over 50 per cent of the patients, with all categories of chemical agents used. These included sympatholytics, antispasmodics, sedatives, histamine, vasoconstrictors, vitamins and central nervous system stimulants, used alone or in combination. The results obtained with these drugs were not appreciably different from the results with placebos, which brought about a 45 per cent improvement.

Migraine patients may profit to a limited extent from the prophylactic use of tranquilizing drugs and in some instances may be especially helped by drugs such as methaminodiazepoxide (Librium®) and certain monoamine oxidase inhibitors that elevate the patient's mood.

Recently we at the Montefiore Hospital Headache Unit have been encouraged by our experience with 1-methyl-D-lysergic acid butanolamide (methysergide) (UML-491).^{5,7} This substance is a serotonin antagonist, the basic actions of which are still to be

TABLE 2.—Responses of Two Groups of Migraine Patients to Alternative Treatments

	UML-491	Placebo	Totals
Excellent or good.....	97	8	105
Fair	30	7	37
Poor	23	12	35
Unreported	26	3	29
Totals	176	30	206

determined. Our experience indicates that the effectiveness of a drug in the treatment of migraine may be related to its ability to inhibit serotonin (Table 1). Recent evidence indicates that UML-491, in addition to its central and anti-inflammatory properties of a nonspecific nature, may secondarily induce peripheral vasoconstriction. It has been suggested that the vasoconstrictor effect is dependent upon the capacity of UML-491 to increase the sensitivity of the individual to his own vasoconstrictor substance. Such vasoconstriction, indirectly induced, is presumed to be the basis of therapeutic action which this agent possesses in the prevention of vascular headaches.³ However, it should be noted that methylation of lysergic acid derivatives in position I not only increases serotonin antagonism but decreases all the other generally known pharmacodynamic properties of these compounds, including vasoconstriction. Whatever its specific action, in 16 months of use it has reduced the frequency and severity of headaches in 65 per cent of a group of 176 patients, which is significantly different from placebo response (Table 2). The average dose for patients with migraine in this series was 6 mg. daily, administered in 2 mg. doses spread out over the day.

Muscular Contraction Headache of Tension Type

Tension headaches occur in connection with constant or periodic emotional conflict, of which the patient is partially aware. They have no prodromata and are usually bilateral, commonly suboccipital but sometimes frontal or around the entire head as a band. There is a gradual onset of the head discomfort, which is frequently described as aching, pressing or tightness but may simulate organic pain of any type. Frequency, duration and severity are variable, but once a headache begins it usually persists for hours or even several days.¹⁰

Excessive muscle contraction and tender spots in the neck and scalp are physical features, and there also may be limited movement of the neck. Tension headache is not accompanied by neurological signs.

As can be demonstrated by action potentials electromyographically recorded from the muscles of the head and neck, sustained contraction of these muscles is associated with the pain.¹¹ However, pain of any etiologic background can cause muscle contraction, so that observing the presence of a muscle

TABLE 3.—Muscle Tension Headache—Symptomatic Treatment

Medication	Action	Per Cent Improved	No. of Patients
Dextropropoxyphene hydrochloride (Darvon) ..	Analgesic	58	120
Acetylsalicylic acid (aspirin)	Analgesic	55	120
Placebo		45	100

TABLE 4.—Results with Various Agents in Treatment of Muscle Tension Headache

Medication	Action	Per Cent Improved	No. of Patients
Aspirin	Analgesic	74	400
Phenacetin	Analgesic		
Caffeine.....	Stimulant		
Sandoval (Floralin)	Sedative		
Dextropropoxyphene hydrochloride	Analgesic	69	262
Aspirin	Analgesic		
Phenaglycodol (Darvon compound)	Tranquilizer		
Placebo		45	100

spasm or recording it by electromyography does not prove a causal relationship. It has been assumed that ischemia which develops in the area of the contracted muscles may play a role in maintaining the pain. However, our measurements with radioactive sodium have indicated that the blood flow in the involved muscles may be actually increased. Further work is being done to prove or disprove this preliminary finding. Another factor may be a central spread of the excitatory effect of noxious stimulation of soft tissues of the neck. Whether one or more of these factors is responsible for the pain in muscle spasm is still to be determined.

Symptomatic Treatment of Tension Headache

As ordinarily used, the nonaddicting analgesics alone are seldom efficient in relieving an acute attack of tension headache. Likewise, tranquilizers and sedatives rarely control the discomfort. But when the analgesic is combined with a tranquilizer or sedative it is extremely effective, for in combination these drugs affect not only the pain threshold but also the reaction to pain (Tables 3 and 4). An analgesic combined with a sedative or a tranquilizer or both gives effective relief in over 70 per cent of treated cases, whereas nonnarcotic analgesics or sedatives, when used alone, are less effective (55 per cent).⁶ It should be noted that placebos are effective in approximately 45 per cent of these patients.

The ideal analgesic for the treatment of tension headache should be effective at levels not impairing sensorium or vital functions, and it should be free of addicting properties, have negligible side effects or toxicity and be simple to administer.

Prophylactic Treatment of Tension Headache

Preventive treatment of tension headaches by chemical agents has undergone a change in recent years because of the introduction of tranquilizers, central muscle relaxants and related compounds. However, since tension headaches are frequently the result of psychological factors, therapy should not neglect this important area. Drugs cannot replace insight and help to the patient in understanding his emotional problems, but they are of value in reducing emotional tension and allowing the patient to handle stressful situations more effectively.

For purposes of evaluating their effectiveness, tranquilizers may be classified by their chemical structure into the following groups: the phenothiazines, the derivatives of rauwolfia, the diphenylmethanes, substituted propanediols, and methaminodiazepoxide.

All members of each chemical group share pharmacological properties and may differ from each other only by dosage requirements. The substances closely related in chemical structure are also likely to produce comparable clinical and toxic effects. Table 5 summarizes some of our experience with the use of tranquilizers in prophylactic treatment of tension headache.

A compound of another type that we have considered in the interval treatment of muscle tension headache is aminophenylpyridone (amphenidone) which has both tranquilizing and analgesic action. Appraisal of this drug in a recent study indicated it was an effective agent in 66 per cent of the patients.

Future Pathways

The necessity for developing new and more critical methods for assessing the effects and efficacy of new pharmacologic agents in the treatment of headache has been stressed by many investigators. It is the author's opinion that the future approach to the evaluation of such drugs must include chemical and pharmacological methods which will enable us to diagnose and classify headache by more objective means. Through these techniques, including the determination of blood levels of drugs, bioassays and the use of radioactive tracers and electronic methods, the subjective responses of patients can be evaluated by objective parameters. With these approaches in mind, the gulf between what the clinician observes and what the neurochemist and

TABLE 5.—Results of Prophylactic Treatment of Muscular Tension Headache with Various Tranquilizer Agents

	No. of Patients	Per Cent Improved
Methaminodiazepoxide (Librium®)	160	72
Meprobamate (Miltown®)	527	62
Phenaglycodol (Ultran®)	514	61
Hydroxyphenamate (Listica®)	66	60
Reserpine (Serpasil®)	641	55
Chlorpromazine HCl (Thorazine®)	114	54
Placebo	100	45

pharmacologist demonstrate should be more easily bridged.

We have progressed a long way from Galen in our approach to pharmacological treatment of headache. It was Galen who said, "All who drink of this remedy recover in a short time, except those whom it does not help, who all die. Therefore, it is obvious that it fails only in incurable cases."

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Refractory Hypotension

Diagnosis and Management in Surgical Patients

LOUIS L. SMITH, M.D., and BRUCE W. BRANSON, M.D., Los Angeles

TWO KINDS of circulatory collapse are seen most frequently in acutely ill surgical patients. One is due to acute reduction of blood volume following loss of blood, plasma or extracellular fluid. This situation is obvious and specific replacement is required. Response is prompt and recovery is the rule providing the cause of the circulatory collapse can be corrected. Circulatory failure of this kind can be called "responsive hypotension."

The other kind of circulatory collapse occurs in surgical patients who, although they seem to have a normal blood or plasma volume, do not have adequate circulation. Frequently such persons because of the obscure nature of the vascular collapse, are given intravenous vasopressor agents. Their response to resuscitative efforts is sluggish, and the mortality rate is high. "Refractory hypotension" is an apt term for circulatory failure of this type.

In the present discussion of the possible causes and treatment of refractory hypotension, we have avoided the term "shock" because of confusion regarding its definition and because it is frequently used in the experimental laboratory to describe a circulatory collapse in which death is considered to be inevitable. Hypotension, for the purpose of this discussion, will refer to those clinical conditions in which the pulse rate is accelerated, the blood pressure low and there is evidence of impaired perfusion of vital organs.

ETIOLOGY

The following case illustrates the problem of refractory hypotension in a postoperative patient.

A 53-year-old Caucasian housewife entered the hospital for elective operation on the biliary tract because of pain in the right upper quadrant of the abdomen. She had had jaundice, which had subsided without medical treatment. A cholecystogram was reported as showing a nonfunctioning gallblad-

• Refractory hypotension is circulatory collapse of obscure cause which occurs in surgical patients who are thought to have a normal blood volume but in whom adequate circulation cannot be maintained. Such patients are usually treated empirically by the administration of intravenous vasopressor agents, and the mortality rate is relatively high.

A specific diagnosis of the underlying cause for the refractory hypotension can be made by thorough clinical evaluation. Specific treatment aimed at correcting the underlying cause of the vascular collapse will lower the mortality rate in this serious type of circulatory failure.

der. At operation the gallbladder was observed to contain many stones and there was a solitary gallstone in the common duct, which was dilated. The ampulla of Vater would not admit a No. 3 Bakes dilator and there was a cholecystoduodenal fistula.

The operative procedure consisted of cholecystectomy, choledocholithotomy, closure of the cholecystoduodenal fistula and transduodenal sphincteroplasty. On the first postoperative day the patient had a temperature of 102.2° F. The pulse rate was 88 and the blood pressure 120/88 mm. of mercury. The hematocrit was 44 mm. (before operation it was 38 mm.).

On the afternoon of the first postoperative day, the patient attempted to go to the bathroom but collapsed on the floor in her room. Soon afterward the blood pressure was unobtainable and no radial pulse could be felt. Abdominal palpation revealed no tenderness. The hematocrit was reported as 49 mm. Intravenous Aramine® (metaraminol) drip administration was begun and the blood pressure rose to 65/50 mm. Intravenous corticosteroid administration (Solu-Cortef® 300 mg.) did not elevate the low blood pressure further. On the morning of the second postoperative day the temperature rose to 103.8° F., the blood pressure and the pulse became unobtainable. The patient was digitalized with Ceditanid®, intravenous administration of tetracycline hydrochloride (Achromycin®) was begun and the concentration of Aramine increased in order to restore the blood pressure. As the response was poor, drip administration of norepinephrine was begun. The hematocrit at this time was 55 mm. The pa-

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tient's condition deteriorated rapidly and she died on the morning of the second postoperative day.

At autopsy, acute pancreatitis with extensive retroperitoneal edema and fat necrosis was noted. There was a focal area of hemorrhage within the head of the pancreas.

In this case, the cause of vascular collapse was not recognized during life and plasma volume replacement was not carried out.

The causes for hypotension in surgical care are few. Common conditions which can produce vascular collapse are: Concealed hemorrhage, cardiovascular catastrophe, pulmonary catastrophe, invasive sepsis, electrolyte disorder, postoperative pancreatitis, vascular impairment of bowel, acute adrenal insufficiency.

Concealed Hemorrhage: One of the commonest causes for unexplained circulatory failure following operation is concealed hemorrhage. This diagnosis is frequently obscure in the early stages before the development of abdominal distention and flank dullness. Continued tachycardia or hypotension responsive to transfusion, a falling hematocrit or bleeding from drain tubes should make one suspicious of this complication.

Cardiovascular Catastrophe: The cardiovascular causes for circulatory failure are well known. Pulmonary embolism, coronary occlusion, or acute cardiac arrhythmias may be responsible for refractory hypotension. In all of these disorders the blood volume is normal and hypotension is the result of "pump failure."

Pulmonary Catastrophe: Disturbances in pulmonary ventilation must be considered as possible etiological factors in the production of refractory hypotension. Undiagnosed pneumothorax or airway obstruction produce vascular collapse by asphyxia. Spreading pneumonia not only impairs pulmonary ventilation but poses the threat of blood stream invasion by the infectious agent.

Sepsis with Blood Stream Invasion: Refractory hypotension may also be brought about by spreading infection with bacteremia or septicemia. Whether the septic process be peritonitis, enterocolitis or pneumonia makes little difference. The acute inflammatory process is associated with the development of inflammatory edema and subsequent reduction of the plasma volume. Additional whole blood volume may be sequestered in congested vessels within the area of acute inflammation. As a result of this inflammatory process there is a reduction of the plasma volume or effective whole blood volume.

Electrolyte Disorders With or Without Acid-Base Changes: Acute surgical illness is frequently associated with significant losses of electrolyte-rich body

fluids through depletion of extracellular plasma volume. When these losses reach a critical point, compensatory mechanisms fail and circulatory collapse ensues. Knowledge of the pressor effect of the sodium ion is important in understanding the pathologic biochemical features of hypotension. This pressor effect is evidently lost by either hyponatremia or sodium deficit even though the two may not occur together. An electrolyte disorder should be considered in any patient with hypotension who also has altered cerebration or neuromuscular irritability or muscular weakness.

Acute electrolyte disorders are frequently associated with acid-base shifts which in themselves may be responsible for altered cardiovascular function. Abnormal breathing or a change in respiratory rate is indicative of acid-base disorders. The usual acid-base change in patients with refractory hypotension is a metabolic acidosis, frequently combined with respiratory acidosis.^{8,9} The metabolic acidosis develops from the accumulation of acid metabolites during a period of low perfusion of tissues and obligatory anaerobic glycolysis. Clinical and experimental observations indicate that there is a diminished response to intravenous sympathicomimetic agents in patients or experimental animals with acidosis.^{5,10,11} This diminished response is most noticeable with respect to myocardial function.

Respiratory acidosis frequently occurs with the induction of anesthesia and in prolonged operations, particularly within the chest.² This acid-base defect can be associated with disturbances in cardiovascular function such as acute cardiac arrhythmia.⁶ Maier and coworkers observed a high incidence of postoperative hypotension in patients with severe respiratory acidosis (blood pH less than 7.1).⁶ Cardiac arrhythmia is most likely to occur on the sudden return to breathing of room air following a period when the patient has been subjected to high concentrations of carbon dioxide with its associated respiratory acidosis.^{3,7}

Acute Pancreatitis: The great masquerader of the upper abdomen is acute pancreatitis. The sudden onset of circulatory collapse may be the first evidence that this disease is present. Several mechanisms predispose to circulatory failure in this condition. One is the extensive loss of plasma in the retroperitoneal tissues due to the acute inflammatory process. A second is the sequestration of whole blood in acutely congested blood vessels in the area of acute inflammation. Still another is the loss of protein-rich fluid into the peritoneal cavity as a result of the acute peritonitis. The net result of these factors is a reduction in the plasma volume and a decrease in the effective circulating whole blood volume. This disease should always be suspected

when unexplained circulatory failure follows any operation, but particularly following biliary or gastric operation.

Vascular Impairment of the Bowel: One of the most insidious causes of refractory hypotension is intestinal obstruction due to mesenteric vascular occlusion. There may be vague abdominal symptoms early in the illness and the radiologic observations may be equivocal. The first sign that bowel infarction exists is the onset of vascular collapse. Prompt diagnosis and definitive operation are essential for survival.

Acute Adrenal Insufficiency: Refractory hypotension in a patient with a history of tuberculosis or the presence of advanced malignant disease raises the possibility of acute adrenal insufficiency due to the destruction of the gland or replacement by tumor tissue. The widespread use of corticosteroid drugs in the management of a variety of chronic medical diseases poses an additional problem of recognizing relative adrenal insufficiency. A history of recent steroid therapy should alert the examining physician to the possibility of vascular collapse due to this cause.

DIAGNOSIS

In dealing with refractory hypotension, critical evaluation is needed to establish an accurate diagnosis and to institute specific therapy. Often a detailed history and physical examination will elicit additional information that may explain the circulatory failure. Table 1 outlines laboratory studies that are helpful in determining the cause of unexplained hypotension. Several points should be emphasized in regard to the use of these studies.

Blood: Serial hematocrit or hemoglobin determinations frequently demonstrate evidence of loss of plasma or extracellular fluid. A rising hematocrit or hemoglobin value indicates plasma loss, the cause of which must be determined by further clinical evaluation. Acute hemorrhage is not associated with an immediate drop in the hematocrit or hemoglobin value, since transcapillary refilling of the plasma volume must take place before the reduced red cell mass can be diluted. Serial determinations of hemoglobin and cell volume are essential if this change is to be demonstrated.

Plasma electrolyte determinations should be obtained if change in cerebation, evidence of neuromuscular irritability or unexplained hypotension develops. In prolonged surgical illnesses in which oral intake of fluids or food has been impossible or there has been excessive loss of fluids and electrolytes through nasogastric or fistula drainage, it is well to make determinations frequently to insure the adequacy of replacement therapy.

TABLE 1.—Suggested Diagnostic Studies in Unexplained Hypotension

A. BLOOD:	
	Serial hematocrit or hemoglobin determinations
	Plasma electrolyte content
	Carbon dioxide content
	Amylase content
	Cultures
B. X-RAY OBSERVATIONS:	
	Postero-anterior film of chest
	Plain film of abdomen
	Lateral decubitus film of abdomen
C. ELECTROCARDIOGRAM	
D. ADRENAL CORTICAL EVALUATION:	
	Eosinophil count
	Plasma corticosteroid concentration
	"Corticosteroid infusion test"

In clinical situations in which the initial carbon dioxide combining power is abnormally high or low or the patient has acute and unexplained respiratory changes, determination of the pH and the total carbon dioxide content of the arterial blood is most helpful in establishing an accurate diagnosis of the acid-base disorder which may be present. A pH determination is necessary to indicate whether a low carbon dioxide combining power is due to metabolic acidosis or respiratory alkalosis.

Serum amylase determination is another helpful diagnostic test in unexplained hypotension. A rising hematocrit or hemoglobin value following operation on the biliary tract or the stomach is an indication for the measurement of amylase activity, particularly if there is evidence of circulatory failure.

The onset of temperature elevation followed by vascular collapse is evidence of bloodstream infection and is indication for obtaining multiple blood cultures. The more cultures drawn, the more likely is identification of the organism. Then sensitivity studies can make antibiotic treatment more effective.

X-ray Observations: X-ray examination of the chest and abdomen is frequently helpful in establishing the cause of unexplained hypotension. Unsuspected pneumothorax, pneumonia or bowel obstruction may be demonstrated. Occasionally it is possible to see free intraperitoneal air or fluid levels on the lateral decubitus view of the abdomen.

Electrocardiogram: It is advisable to obtain an electrocardiographic tracing on all patients with unexplained vascular collapse and to interpret it with care. S-T segment changes and nonspecific T wave changes can occur as a result of myocardial ischemia following the onset of a hypotensive incident.

Adrenal Cortical Evaluation: Acute adrenal cortical insufficiency can be diagnosed by actual measurement of the plasma corticosteroid levels* or by an eosinophil count. The presence of a normal num-

*The term corticosteroid is used herein to mean 17-OH corticosteroid.

ber of circulating eosinophils in a patient with circulatory stress is evidence of adrenal insufficiency. If serious question exists that adrenal failure may be the cause of the vascular collapse, the administration of intravenous hydrocortisone as an "infusion test" should promptly solve the problem. This test will be discussed later in this paper.

MANAGEMENT

The aim of treatment in refractory hypotension is the restoration of adequate perfusion to vital organs at the earliest possible time. Blood pressure alone does not always reflect the status of organ perfusion or capillary circulation. One must consider the mental status of the patient, vital organ function (such as urinary output) and the general clinical appearance. The following treatment routine has been found helpful in restoring circulatory homeostasis in problem cases.

Correction of Electrolyte Disorders: Any demonstrable electrolyte disorder should be corrected, particularly any evident deficit of the sodium ion. Acute losses of sodium are frequently associated with extracellular fluid volume reduction in surgical patients. One must be careful to distinguish acute sodium deficit from a low plasma sodium concentration of dilutional origin produced by overadministration of electrolyte-free solution during the post-traumatic period of antidiuresis.

We have observed beneficial results by the administration of concentrated sodium solutions to patients with refractory hypotension who had low plasma sodium concentrations.⁹ The use of hypertonic saline solutions (3 per cent or 5 per cent sodium chloride) allows the correction of acute sodium deficiency without the administration of excess water. The coexistence of hyponatremia and metabolic acidosis makes sodium bicarbonate or lactate the ideal repair solution. One cannot postulate that all patients in shock will benefit by the use of concentrated sodium salts. The sodium therapy must be matched to the particular deficit observed in each instance.

Correction of Acid-Base Disorders: As previously mentioned, the two commonest disorders of acid-base balance in patients with refractory hypotension are metabolic acidosis and respiratory acidosis.^{8,9} Sodium bicarbonate or lactate is useful in correcting any existing metabolic acidosis. It should be borne in mind, however, that the administration of base cannot be expected to restore a normal hemodynamic state in the presence of an uncorrected deficit in blood volume. Following adequate blood volume restoration, the correction of

an associated metabolic acidosis in a patient with refractory hypotension might be expected to improve cardiovascular function.

The most important aspect of dealing with respiratory acidosis is preventing it. Adequate ventilation during long and extensive operations, encouraging coughing and deep breathing in the postoperative period, and endotracheal suctioning, particularly in thoracic operations, will help to minimize the threat of respiratory acidosis. Respiratory acidosis is usually difficult to treat once it develops, for there is usually some underlying acute or chronic pulmonary disease process such as pneumonia or emphysema. The judicious use of tracheostomy where indicated, and of positive pressure assisted respiration, offer the best chance of improvement.

Control of Sepsis: In the case of vascular collapse as a concomitant of severe sepsis, vigorous and prompt control of the infection by a combination of well-established surgical principles and intensive antibiotic therapy offer the best chance for survival. Broad spectrum antibiotics should be administered in high concentration by the intravenous route since intramuscular antibiotics may not be absorbed during the period of acute vascular collapse. Administration of whole blood or plasma until the venous pressure [monitoring of central venous pressure is discussed later in this presentation] begins to show an elevation has been helpful in restoring circulatory homeostasis in some of these patients. A critically ill patient with severe sepsis and vascular collapse may show a favorable response to overtransfusion.⁴

Blood Volume Restoration: Whole blood and plasma are the most important therapeutic agents in the treatment of refractory hypotension. Although one must be concerned about overtransfusion and congestive heart failure, elderly patients in vascular collapse are as vulnerable to prolonged underreplacement of blood as they are to sudden overtransfusion. Colloid replacement must be accurately tailored to the apparent volume requirements of the patient. The object of this therapy should be to restore not only the blood pressure but the flow of blood to vital organs.

Corticosteroid Administration: The diagnostic tests for establishing adrenal cortical insufficiency have been outlined. In clinical situations in which urgency demands that it must be determined quickly that adrenal insufficiency is not the cause of vascular collapse, the "corticosteroid infusion test" can be used. Solu-Cortef in a dosage of 100 to 300 mg. can be administered intravenously in 500 cc. of normal saline solution. Signs of circulatory improvement should promptly become evident if adrenal insufficiency is the cause.

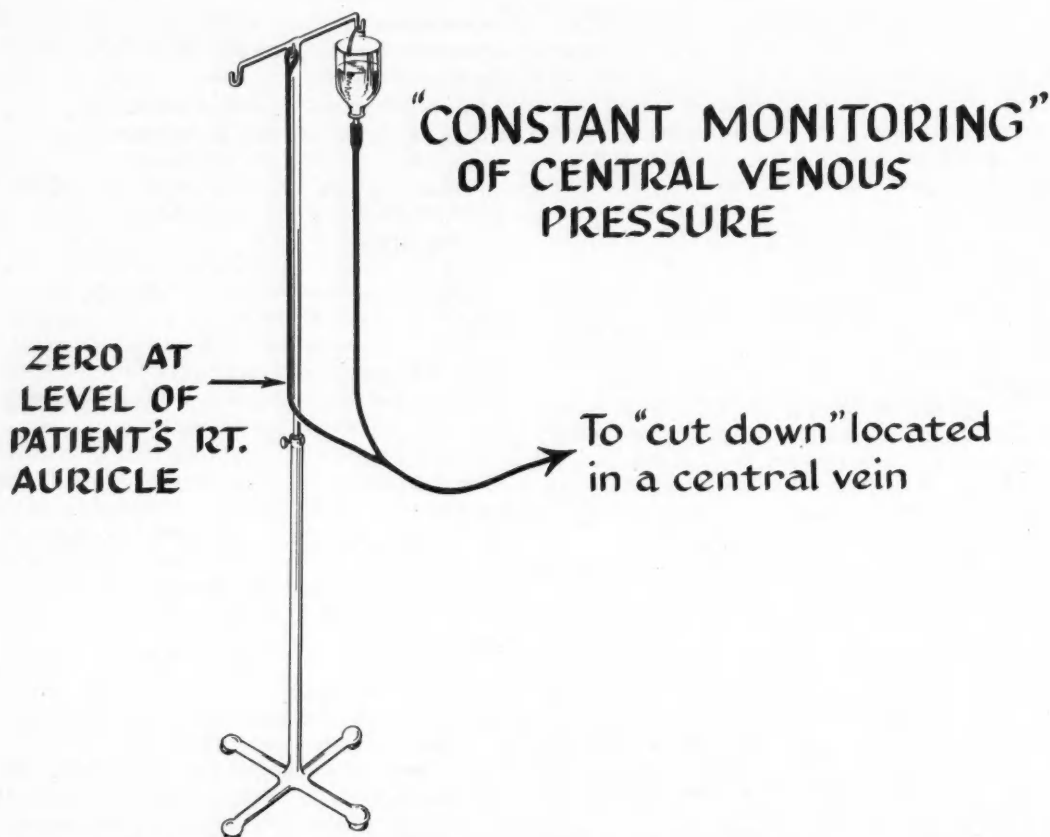


Figure 1.—Diagram of a simple disposable venous pressure set.* One vertical limb of the plastic Y is taped to the intravenous standard on which is placed an adhesive tape scale with zero at the estimated level of the right auricle of the heart. The second vertical limb of the plastic Y is connected to a bottle of normal saline solution and serves as a reservoir for filling the "manometer" limb of the apparatus. Following filling the "manometer" with saline solution, the reservoir side is clamped and the column of saline solution is allowed to seek the level of the patient's venous pressure. Such measurements can be made as often as desired and serve as a constant monitor of myocardial function relative to blood volume replacement.

Clinical studies by Anderson and coworkers¹ indicated that in certain situations, particularly bloodstream infection, the administration of pharmacological doses of hydrocortisone may attenuate the cardiovascular effect of the septic process. The dose in this case would approach a gram per day and would be continued for a short time only, then gradually tapered until discontinued. Such intensive therapy awaits further clinical and experimental evaluation. The use of this potent drug is not without serious complications and should be resorted to only when conventional therapy has failed to restore adequate circulation.

Vasopressor Therapy: The use of the potent vasopressor drugs in the management of circulatory collapse has been the source of considerable contro-

versy. In elderly patients we have found these drugs useful to maintain blood pressure until specific therapeutic measures have restored adequate circulation. Patients under general or regional anesthesia with diffuse circulatory paralysis likewise respond well to the temporary use of vasopressor drugs.

The apparent improvement in blood pressure following the use of these potent drugs should not lull the surgeon into complacency. The underlying cause for the circulatory collapse must be determined. Every effort should be made to institute specific therapy and to discontinue the administration of vasoconstrictor agents at the earliest possible moment.

Care should be taken not to produce an acute dilutional hyponatremia by the over-administration of 5 per cent dextrose in water relative to the concentration of vasoconstrictor being used. The fluid

*Made by the Fenwal Laboratories, Framingham, Mass.

volume administered should be closely observed and the concentration of vasoconstrictor drug increased when fluid intake exceeds actual body requirements.

GUIDES IN TREATMENT

The objective of the therapeutic program to be used in patients with circulatory collapse is the maintenance of adequate perfusion to vital centers and the restoration of circulatory homeostasis at the earliest possible time. Several indices are helpful in the management of these patients. These include observation of the state of consciousness, vital signs and hourly urinary output, monitoring the central venous pressure and the serial determination of the hematocrit or hemoglobin. An alert patient with adequate urinary output is not in serious danger even though the blood pressure may have fallen. By contrast an elderly hypertensive patient who is stuporous and oliguric is in immediate danger even though the blood pressure may still be within a normotensive range.

In acute circulatory disturbances the production of urine usually reflects the status of the blood volume. If there is a blood volume deficit, oliguria ensues. Hence the value of the hourly urinary output in determining whole blood or plasma volume deficits in refractory hypotension. A rising hourly urine output concomitant with colloid administration indicates favorable progress in restoring the blood volume. The urine output should range between 30 and 60 cc. per hour.

Central venous pressure is another helpful guide in determining the adequacy of colloid administration in patients with refractory hypotension. A polyethylene catheter (the size of a 14 gauge needle) is placed in a large arm vein and inserted to the axillary or subclavian level. The venous pressure is then measured at frequent intervals by observing the height of a column of saline solution in the vertical limb of a disposable venous pressure set. Zero is at the estimated level of the right auricle. Figure 1 shows such a venous pressure set.* Colloid administration can be safely continued as long as the venous pressure remains stable. A rising venous pressure indicates overexpansion of blood volume relative to myocardial function. In such a situation, the rate of transfusion must be curtailed and the patient digitalized; or, if the patient's condition has become stabilized, consideration should be given to venesection. In our experience, the serial observation of the central venous pressure has been more helpful in determining the colloid requirement of patients with refractory hypotension than has actual measurement of the blood volume, which all too fre-

quently shows the volume to be normal or increased, yet the patient remains in circulatory collapse.

DISCUSSION

There is a growing tendency to consider circulatory collapse or shock as a primary diagnosis rather than to recognize it for what it is—a sign of a serious underlying complication. Too frequently a patient with refractory hypotension is considered to be in “irreversible shock.” It should be pointed out that no clinical test or criteria are available to determine when a patient has become refractory to all therapy, and “irreversible” therefore has no place in clinical service except possibly in viewing such a problem case in retrospect.

Circulatory collapse as we see it on the clinical service is different from that produced in the laboratory. This condition frequently occurs in elderly arteriosclerotic patients with degenerative diseases involving multiple organs. This is in contrast to the healthy laboratory animal with no degenerative or significant arteriosclerotic changes. The presence of diffuse arteriosclerosis makes specific treatment imperative and requires greater vigilance during therapy if the patient is to survive.

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* Available from the Fenwal Laboratories, Framingham, Massachusetts.

Evaluation of Colon Dysfunction

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RECTAL BLEEDING, passage of mucus, excessive intestinal gas, bloating, abdominal discomfort, rectal tenesmus, feeling of incomplete evacuation, change in character of stools, diarrhea, and constipation are complaints that prompt many patients to consult a physician.

How do we determine which patient has an irritable bowel, which has diverticulitis, or an ulcerative process, or polypoid disease? Certainly proper diagnosis cannot be arrived at simply by relying upon barium enema and other x-ray studies to distinguish organic from functional disease. Barium enema studies, while extremely helpful, are only about 85 per cent accurate in ruling out a carcinoma of the colon, are of little help in demonstrating a rectal carcinoma, and about 50 per cent accurate in differentiating between diverticulitis and carcinoma. The guaiac or benzidine stool examination for occult blood is worthless in evaluating a colon problem. Cellular studies of colon washings have not yet reached a practical stage.

Much has been written and said about the art of medicine, treatment of the entire individual and evaluation of how the patient's environment affects his health. Our forefathers in medicine called this "common sense."

Patients experiencing bowel dysfunction are frequently sensitive and fearful. They are positive that "something is wrong," and are willing to subject themselves to embarrassment, expense and discomfort to obtain aid. They soon sense and resent disinterest in a physician.

A positive approach and common sense are indispensable to the physician in making a diagnosis of an irritable bowel. This type of dysfunction is due to an over-stimulation and imbalance of the autonomic nervous system of the colon, resulting in increased peristaltic activity, spasm and excessive production of mucus. Other systems too are involved in this same autonomic nervous system disturbance. Further, the patient's personality makes him especially vulnerable to stress and tension. If we put all these factors together, we should arrive at a proper diagnosis.

Few entities give so many clues. In appearance the patients are dressed neatly, conservatively and

• There being no new or advanced technical aids to help the clinician in evaluating colon dysfunction, he must still depend on a careful history, knowledge of the patient, physical examination, which includes sigmoidoscopy, and a few appropriate diagnostic laboratory procedures to arrive at the proper diagnosis. With these means, it is possible to make a positive diagnosis of irritable bowel syndrome, and differentiate it from diverticulitis, ulcerative proctitis and polypoid disease.

without clash of color; tie, socks, shoes and accessories all match. Their manner is polite, they desire to make a good impression, and when in the hospital their bedside-table and immediate area are kept neat and orderly. A few questions indicate that this physical orderliness is also true at work and at home. Those in the business world usually handle jobs of responsibility and detail. The housewife may be active in community work, as well as anxious about her children. When these people assume a task they want to do it well. This would apply even to relatively simple chores, such as preparing a dinner for close friends.

The history of an autonomic bowel dysfunction usually follows a pattern having the following general characteristics: The patient has had similar distress before, perhaps less severe or protracted but rather sudden in onset, with intervals of complete relief. Not infrequently the pattern is so exact that it can be related to job deadlines, weekends, menstruation, family events, visits and similar happenings. When diarrhea is present it is primarily a morning diarrhea, for at night the autonomic nervous system rests too. (When a patient is awakened from a sound sleep because of abdominal distress, there is good cause.) An irritable bowel may cause the passage of gross mucus, either thick or watery but not bloody; the presence of blood signifies mucosal ulceration.

As the colon is not the only system involved by this autonomic nervous system imbalance, the history invariably includes other signs of anxiety—globus, dry mouth, palpitation, headaches, backaches and sudden fullness after eating. In addition, there is frequently history of previous gallbladder, gastric, pelvic or anorectal operation without any apparent improvement of the complaints.

Upon physical examination, signs of general ten-

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sion usually are noted, occasionally dermatographia and sometimes a rope-like sigmoid colon. With sigmoid spasm, reflux fullness of the ileocecal area is not uncommon. Voluntary spasm of the rectal sphincter is often a feature. In many cases a sigmoidoscope can be inserted with ease for about 15 to 18 centimeters, then suddenly spasm and decided reaction on the part of the patient are encountered. A barium enema study will often demonstrate signs of colon irritability and spasm.

The diagnosis of an irritable bowel should not be made unless there are other signs and symptoms of autonomic nervous system dysfunction in a susceptible patient. If symptoms persist or if the pattern changes, review of the entire intestinal tract is indicated. An irritable bowel does not preclude the development of carcinoma or diverticulitis.

Frequently confused with an irritable bowel syndrome is diverticulitis, which is becoming a problem of increasing magnitude in our aging population. Most persons over 40 years of age have diverticula. Many of them also have an irritable bowel. Diverticulosis and an irritable bowel, however, do not necessarily indicate diverticulitis. Too often this diagnosis is made on inconclusive evidence.

Diverticulitis is an extra or pericolic inflammatory reaction that usually involves the sigmoid colon and adjacent structures. As the process is mostly extracolonic, the diagnosis is usually made clinically rather than by x-ray studies.

Certainly the diagnosis of diverticulitis is tenuous unless the patient has signs of an inflammatory process. These may include a tender, palpable mass, leukocytosis, fever, and evidence of peritoneal irritation. While bleeding may occur with diverticular disease of any type, the burden of proof is with the clinician who attributes bleeding to such a source. The author has on record more than a hundred cases of rectal bleeding initially thought to be due to diverticular disease but subsequently proved to result from a polyp or a carcinoma.

It is clinically most important to bear in mind that the inflammatory process in diverticulitis is extracolonic. A high digital examination of the rectum and vagina are as important as the abdominal examination in detecting what is usually an abdominal and pelvic inflammatory process. Because it is an extracolonic process, signs of involvement of the bladder and adjacent small bowel should be looked for. Diverticulitis is seldom evident on proctoscopic examination.

Partial colon obstruction or dysfunction is not infrequent with diverticulitis. However, it is difficult to obstruct the colon completely, and this seldom happens with diverticulitis. While it may appear contrary to fact, in my experience adjacent small bowel obstruction has occurred more fre-

quently than large bowel obstruction in diverticulitis. For this and other reasons, there is an increased surgical awareness that proximal transverse colostomy has limited value in the treatment of diverticulitis. Carcinoma remains the most common cause of complete colon obstruction.

At times idiopathic ulcerative colitis presents a problem of differentiation from an irritable bowel. There is little difficulty in recognizing the disease when all or a major portion of the colon is involved, but a not uncommon variant of ulcerative disease, termed "ulcerative proctitis" for want of a better name, is frequently overlooked. This form of the disease involves the rectum and on occasion the most distal sigmoid colon, the area that is supplied by the superior hemorrhoidal artery. As with chronic ulcerative colitis, this is an inflammatory-like mucosal submucosal process with myriads of tiny ulcerations that cause a rectal discharge of pus, blood, mucus and cellular debris. This material collects just above the rectal sphincter and causes rectal tenesmus and a rather constant feeling of incomplete evacuation. Frequently a paradox is present. The patient may speak of passing a formed stool, even with some mechanical difficulty, yet have diarrhea. The latter is due not to fecal material but to the discharge.

This anatomically limited ulcerative process, like the more universal colon type, has episodes of exacerbation and remission. While less violent, it seems more refractory to treatment. Furthermore, it may extend proximally to any level.

Only by proctoscopic examination can the diagnosis of ulcerative proctitis be established. Barium enema studies show only that there is no gross evidence of higher involvement, and frequently x-ray studies are entirely negative.

One must beware of making a diagnosis of any form of ulcerative colitis unless there is a transrectal discharge of blood, mucus, pus and cellular debris. A smooth contracted-appearing colon, demonstrated by barium enema study, may simply represent spasm. A disturbed mucosal pattern is the main finding of an ulcerative process.

It is impossible to describe with certainty the typical personality of a patient with ulcerative colitis. Appearance and personality seem to vary with the state and course of the disease.

Finally, whenever there is disturbed function, polypoid disease also has to be considered. An adenomatous polyp or an adenocarcinoma have one common sign: rectal bleeding. Every effort should be made to establish the source of transrectal bleeding. An irritable bowel is not *per se* a source of bleeding.

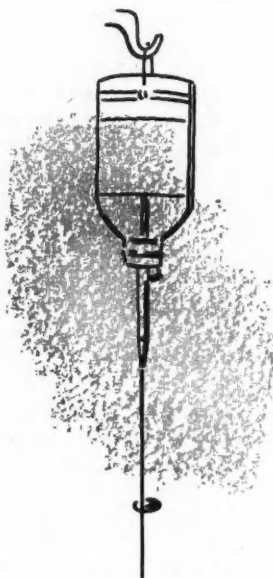
Further, although every adult has hemorrhoids, this does not necessarily mean that they have bled.

A simple rule to follow is that every patient who has rectal bleeding has polypoid disease until proved otherwise. Certainly the passage of dull to dark red blood, bloody mucus, blood clots or blood mixed in the stool indicates a source higher than hemorrhoids.

Many patients and a few physicians have the mistaken impression that the presence of a carcinoma automatically causes pain, decided loss of weight or change in the patient's general appearance. Were we to rely entirely on this for diagnosis, carcinoma often would go undetected. Quite as important as

thorough investigation of bleeding is attention to changes in bowel habits, which when due to a colon carcinoma are usually insidious but progressive. This is in contrast to the varying bowel pattern associated with irritable colon. Questioning of a patient should be directed toward eliciting family history of colorectal carcinoma. Finally, another suggestion of polypoid disease is the presence of various external skin lesions. The squamous epithelium of skin is said to mirror the inner mucosal epithelium.

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The Sjögren-Mikulicz Syndrome

Its Relationship to Connective Tissue Disorders

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WITHIN THE LAST FEW YEARS Sjögren's syndrome and Mikulicz' syndrome, previously believed to be two separate entities, have come to be recognized as a single, combined syndrome significantly related to rheumatoid arthritis as well as to other connective tissue diseases.

That the entity is more common than was formerly supposed is attested by the several large series of cases recently assembled,^{5,16} which have brought the number of reported cases to over a thousand, and by the fact that, when properly tested for, its ocular manifestations have been found to be the most frequent type of eye involvement in rheumatoid arthritis.^{10,17}

Sjögren's Syndrome (Sicca Syndrome). A detailed description of Sjögren's syndrome has been available in the ophthalmological literature since 1933.¹⁴ The condition is characterized by dryness of the nose, mouth, throat and vagina; by a decrease in the quantity of tears, and, as demonstrated electrophoretically, by deficiency of lysozyme in the tears.⁷ This enzymatic deficiency occurs early; it may precede the decrease in quantity of tear production. As tear secretion progressively diminishes, abnormalities develop in the epithelium of the cornea and conjunctiva. At this stage, known as *keratoconjunctivitis sicca*, small punctate defects occur in the cornea, characteristically in its lower half. When the disease becomes far advanced, *fili-form keratitis* ensues: Epithelial threads, often in the form of spiral filaments, are attached at one end to the cornea and float freely at the other.

Mikulicz' Syndrome. Considerable confusion has existed regarding the nature of nonsuppurative relapsing parotid swellings since Mikulicz recorded the first such case in 1892. During the years that followed, a variety of unrelated conditions causing enlargement of the parotid glands were grouped together under the name *Mikulicz' syndrome*, with no regard to the histopathologic features in the

• Sjögren-Mikulicz syndrome, formerly thought rare, is recognized with increasing frequency, especially in middle-aged and elderly women. Often in the past, because of the peculiar swelling of the parotid gland which is a feature of the disease, the gland was removed on suspicion of cancer. New tests can identify cases in which the swelling is a part of the Sjögren-Mikulicz syndrome. In those cases the enlargement may disappear spontaneously or after treatment with corticosteroids. The tests consist chiefly of examining both the quality and the quantity of tears secreted; and in some cases biopsy of the gland may be necessary.

The syndrome appears so often together with rheumatoid arthritis and related diseases as to give indication that it may be related etiologically. The cause is unknown. One possibility is that the patients form antibodies to their own glandular products, which destroy those products.

gland. Within the past decade Morgan and Castleman⁹ defined the changes in the parotid gland of patients with Mikulicz' syndrome. When such diverse entities as Boeck's sarcoid, lymphoma and tuberculosis were excluded, the histologic features in Mikulicz' syndrome were seen to be unique. They consisted of diffuse infiltration with lymphocytes and pronounced alteration of the ducts. Small islands (epimyoeptithelial islands) were formed, containing altered ductal material, and were characterized by hyalinization and fibrosis (Figure 1). When the clinical features of these cases were reviewed,⁸ it was observed that in many of the patients the eyes and mucous membranes had been dry; in a number of instances, the diagnosis of *keratoconjunctivitis sicca* had been made.

The Combined Sjögren-Mikulicz Syndrome. Because patients who complain primarily of dry eyes (Sjögren's syndrome) often also have parotid enlargement, and because patients with parotid swelling (Mikulicz' syndrome) frequently have dry eyes, the identity of the two syndromes is suggested. When it is recalled that the pathologic findings in the parotid glands of both groups of patients are the same, and inflammatory joint disease is common to both groups of patients,⁸ Sjögren's syndrome and Mikulicz' syndrome merge into one entity. Failure

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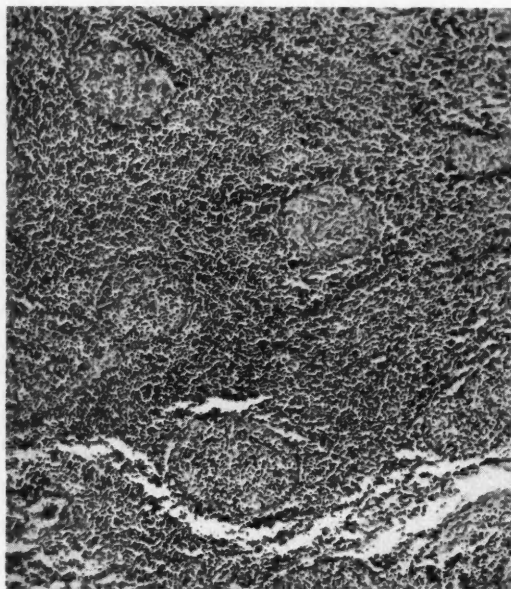


Figure 1.—Photomicrograph of section of parotid gland, showing many epimyoeplithelial islands containing altered ductal tissue and hyaline material surrounded by massive lymphocytic infiltration ($\times 100$).

to recognize their identity in the past had stemmed from the fact that many cases, especially in the earlier stages, represented a *forme fruste* or an incomplete syndrome—in some it was parotid enlargement that was noticed first; in others it was the ocular complication. However, as the disease progressed, the entire triad of mucosal and ocular dryness, parotid enlargement and arthritis would often appear.

In its fully developed form the combined syndrome consists of dryness and atrophy of the conjunctiva, cornea, buccal and nasal mucosa, tongue, throat and vagina, and hyposecretion of the gastric and other exocrine glands. Recurrent nonsuppurative parotitis is frequently present. Arthritis is a usual feature of the disease. The condition mainly affects older women, and familial occurrences have been observed.

RELATIONSHIP TO THE CONNECTIVE TISSUE DISEASES

Arthritis. Sjögren¹⁵ found objective evidence of arthritis in 64 per cent of patients who had the syndrome that bears his name. Other investigators, employing the rigid criteria for the diagnosis of rheumatoid arthritis established by the American Rheumatism Association, have confirmed the frequent incidence of rheumatoid arthritis in patients with the sicca syndrome.³ The presence of positive rheumatoid reactions to serologic tests in as

many as 95 per cent of patients with the syndrome has further demonstrated this intimate relationship.¹ When patients in an arthritis clinic were screened for keratoconjunctivitis sicca by means of the rose bengal test, a positive diagnosis was made in more than 14 per cent.⁵ Keratoconjunctivitis sicca was found in as many as 34 per cent of patients with advanced rheumatoid arthritis.¹⁷ When one considers that rheumatoid arthritis is widespread among the general population, it is apparent that the Sjögren-Mikulicz syndrome can no longer be considered an uncommon clinical problem.

Other Connective Tissue Disorders. Because rheumatoid arthritis resembles the other diseases that primarily affect connective tissue, it is plausible to expect that the Sjögren-Mikulicz syndrome would appear in these diseases as well. In 1952, Pirofsky and I reported recurrent nonsuppurative parotitis in three of 34 patients with systemic lupus erythematosus;¹³ more recently, in reviewing a group of 83 patients with systemic lupus erythematosus¹¹ for the presence of parotitis, it was seen in 7 per cent. When patients with Sjögren's syndrome were investigated for systemic lupus erythematosus, the LE phenomenon was observed in more than 35 per cent.⁴

Sjögren-Mikulicz syndrome also occurs in scleroderma, an association recently reviewed by the author¹² and since reported by other observers.^{1,16} It has been noted, but only rarely, in polyarteritis.^{2,10,16}

ETIOLOGY

The close association between Sjögren-Mikulicz syndrome and connective tissue disorders suggests a pathogenic link between them. The frequent incidence of abnormal serologic reactions in patients with the Sjögren-Mikulicz syndrome is reminiscent of the abnormalities in immune reactions and in serum proteins displayed by the connective tissue disorders. Bloch and associates¹ found hypergammaglobulinemia in 71 per cent, positive reaction to the Coombs test in 25 per cent, and thyroglobulin antibodies in 14 per cent. The striking similarity between the pathologic changes in the parotid gland in Sjögren-Mikulicz syndrome and those in the thyroid gland in Hashimoto's disease has suggested that an autoimmune mechanism may operate in the Sjögren-Mikulicz syndrome. This hypothesis is strengthened by the occasional demonstration of antibodies to extracts of lacrimal and salivary glands in the blood of patients with the syndrome.⁶ Although at this stage of knowledge much regarding pathogenesis is still unclear, the immunologic approach appears to be most promising.



Figure 2.—Schirmer test—a measure of tear secretion.

DIAGNOSIS

Although all features of the combined syndrome may not be manifest, particularly in the early stages of disease, appropriate diagnostic tests should be performed in any patient with dryness of the eyes and mucosal surfaces, or idiopathic enlargement of the parotid gland, especially when noted in conjunction with arthritis. The tests, which are in the main simple and readily available, are as follows:

Tests for Ocular Manifestations. The quantity of tears produced may be measured by means of Schirmer's test (Figure 2). Filter paper of standard size is inserted under the lower lids. The normal subject wets 15 mm. of the paper in five minutes; patients with the Sjögren-Mikulicz syndrome will wet less than that. In advanced cases the test paper may remain completely dry. This is a screening test, and may occasionally give false-positive responses, especially in elderly persons, but one can be relatively confident if only 5 mm. or less of the paper is wet in the given time.

The electrophoresis of tears represents a more precise test of lacrimal secretion. There is decrease or absence of lysozyme in the tear fluid as an early and constant finding in keratoconjunctivitis sicca. Unfortunately this valuable test is limited because it requires special equipment and technical skill.

The punctate defects in the cornea designated as "keratoconjunctivitis sicca" may be discerned through a slit lamp after instillation of a 1 per cent solution of fluorescein. Fluorescein paper strips may also be employed, and if a slit lamp is not available a magnifying glass may be used.

Instillation of rose bengal dye is an alternative to slit lamp examination. Cautious interpretation is necessary since in sensitive persons the dye itself occasionally causes epithelial trauma. Topical anesthesia beforehand is advisable to avert pain. A positive reaction to the rose bengal test is intense staining of the conjunctiva. Red triangles appear with their bases toward the cornea, filling the palpe-

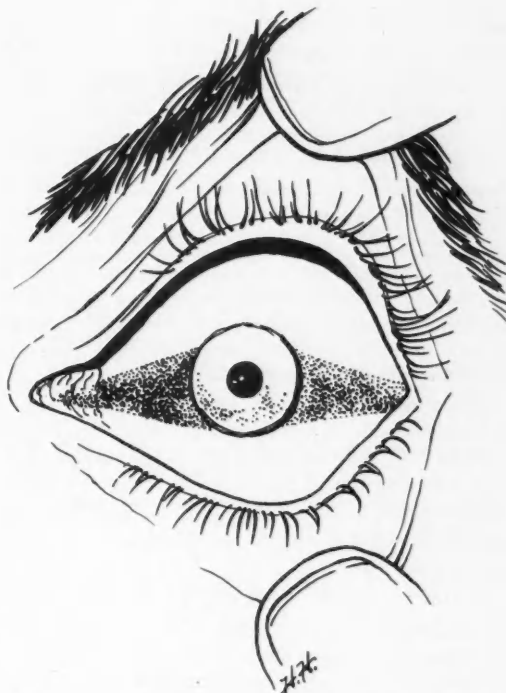


Figure 3.—Appearance of the eyes (with rose bengal solution) in keratoconjunctivitis sicca.

bral aperture (Figure 3). In earlier stages of disease, staining may be limited to irregular discontinuous areas of the conjunctiva. These are not diagnostic; they are occasionally seen in apparently normal subjects.

In a small proportion of patients filiform keratitis develops as a late complication of the disease. This can be diagnosed with a corneal microscope by the characteristic appearance of the filiform epithelial threads. One should not wait for this advanced sign before making the diagnosis of Sjögren-Mikulicz syndrome.

Test for Parotid Gland Manifestations. Enlargement of the parotid gland often suggests neoplasm, and may lead to parotid extirpation with its risk of facial palsy. The diagnosis of Sjögren-Mikulicz syndrome as the cause of the enlargement may be confirmed by biopsy. Punch biopsy of the parotid has been used successfully, but surgical biopsy appears to be the safer procedure.

THERAPY

Treatment for the parotid enlargement is seldom necessary, since the gland frequently subsides spontaneously. In some cases the administration of steroids is followed by prompt detumescence, a re-

sult that may be related to the anti-inflammatory action of these compounds.

Parenterally administered steroids appear to have no consistent effect on the ocular manifestations. Protective eyeglasses plus the liberal use of methyl cellulose or cortisone eye drops are of real value. Eyeglasses that squirt fluid into the eyes have been devised for use in advanced cases, but they are cumbersome and are seldom if ever necessary.

When the sicca syndrome is accompanied by systemic illness, such as rheumatoid arthritis, the symptoms of arthritis are usually more distressing than those of the sicca syndrome and appropriate therapy should be directed toward the associated disease.

The following case of Sjögren-Mikulicz syndrome in association with polyarteritis is briefly described, because (1) this relationship has so rarely been reported, and (2) it points up the possibility that surgical extirpation of the parotid gland may be avoided in cases of this syndrome.

REPORT OF A CASE

A 36-year-old white housewife had had good health until age 26 when bilateral parotid swelling, severe joint pains, fever, adenopathy and splenomegaly developed. Results of laboratory tests showed moderate normochromic anemia and a biologically false-positive serological reaction. The symptoms subsided after one week in hospital and the patient remained well for two years. Then the left parotid enlargement recurred. Because of suspicion of a parotid tumor, the gland was removed. Microscopic section (Figure 1) showed epimyoeplithelial islands containing altered ducts surrounded by lymphoid tissue, the characteristic features of Mikulicz' syndrome. Over the next few years the patient continued to complain of aching in the larger joints and in the back and noted progressive dryness of the mouth. Recently, at the age of 36, she had a severe bout of chills with fever, the temperature rising to 104° F. (40° C.). Generalized adenopathy and moderate splenomegaly were noted. The hemoglobin level was 9.8 gm. per 100 ml. of blood; leukocytes numbered 3,000 per cubic centimeter. No protein abnormalities were demonstrated by electrophoresis of serum, and responses to the LE preparation and to Latex agglutination tests were negative. Biopsy of an anterior cervical lymph node showed necrosis of the medullary arterioles with fibrin thrombi and perivascular neutrophilic infiltration, changes consistent with panarteritis.

Three months later the patient had another episode of spiking fever, associated with diffuse adenopathy and splenomegaly. The right parotid

gland became grossly swollen and painful but the swelling subsided without specific treatment in four days.

For the six months preceding the time of this report the patient complained of dryness of the eyes and of progressive increase in the dryness of the mouth. Upon examination of the eyes with fluorescein, a few small superficial punctate staining areas were observed in the lower third of each cornea. Response to the Schirmer test was normal in each eye but electrophoresis of a tear sample revealed slight diminution of lysozyme, which may represent early involvement of the lacrimal glands. Use of methyl cellulose eye solution apparently relieved the ocular symptoms.

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Vernal Conjunctivitis as an Atopic Disease

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ATOPY, an allergic state that occurs in man, is characterized by skin-sensitizing antibodies called reagin. These antibodies are directed toward various naturally occurring substances such as pollen, house dust, animal danders and occasionally food. About 70 per cent⁸ of persons with hypersensitivity of this order report that other members of their immediate families also have it.

The disease usually starts in childhood. The major manifestations of atopy are asthma, perennial allergic rhinitis and atopic dermatitis. A frequent concomitant is eosinophilia in the circulating blood or in material from some local site. The diseases are linked together as part of the atopic syndrome, as they have in common the above characteristics.

The etiologic agents of atopy are not always identified in all cases. Pollen is the cause of hay fever; house dust and epidermal products are the cause of certain cases of perennial asthma and allergic rhinitis. Some cases of atopic dermatitis have been traced to one or more of the atopens. However, the etiologic agent or agents that are supposed to be basic in cases of atopic disease have not always been found.

Until evidence to the contrary is presented, the atopic diseases should be investigated clinically and experimentally as a variation of the same basic abnormality, for two compelling reasons: (1) Different types of atopic disease often occur at the same time or serially in the same patient or family; (2) the same group of antigens has been found to be responsible in all of the diseases at one time or another.

Vernal conjunctivitis is an eye disease of childhood, with many of the characteristics of an allergic reaction. Its most striking feature is the cobblestone excrescence on the underside of the upper lid.

Is vernal conjunctivitis an atopic disease? Since there was no diagnostic or laboratory test to give the answer, we selected 30 patients with vernal conjunctivitis and measured them by the laboratory criteria used in patients with hay fever, namely: (1) positive reaction to skin tests with grass pollen;

• In a study of 30 cases of vernal conjunctivitis, antibodies to grass pollen were demonstrated in 16 of 29 patients tested by direct skin tests, in 11 of 30 tested by the Prausnitz-Kustner method and in 22 of 30 by the bis-diazotized benzidine hemagglutination method.

A personal history of major atopic disease was found in 13 of 27 patients, and a family history of atopic disease in 16 of 26 patients questioned.

Conjunctival eosinophilia was found in all cases. Results of the study indicated that vernal conjunctivitis is an atopic disease.

(2) serum antibodies to grass as demonstrated by the Prausnitz-Kustner (P-K) serum passive transfer test and the bis-diazotized benzidine hemagglutination technique.⁵

Hay fever was selected because it has, in common with vernal conjunctivitis, the remarkable feature of exacerbation in the spring and subsidence in the winter. Rye grass was selected as the antigen for the hemagglutination test for two reasons: (1) Grasses (with the possible exception of Bermuda) have antigens in common,⁴ so that the group may be represented, although not entirely, by one grass; (2) rye grass is one of the most common offenders to hay fever sufferers in the State of California.

MATERIALS AND METHODS

Patients in whom vernal conjunctivitis was diagnosed by an ophthalmologist were referred to the Francis I. Proctor Foundation for Ophthalmological Research for examination or were observed in the referring physician's office. All but three of the patients were examined by the author. Patients in whom clinically there was some doubt as to a diagnosis of vernal conjunctivitis, and also those who had a history of past vernal conjunctivitis but did not have the disease at the time of examination were excluded from the study.

A history, cultures of materials from the conjunctiva and lids and smears for eosinophils were taken. Blood was drawn for P-K and hemagglutination studies. Intradermal skin tests were performed on the forearm, using 0.05 of a 1:660 dilution of mixed California grasses, a 1:660 dilution of rye grass (*Lolium perenne*), and a control of diluting (Coca's) solution; reactions were read in 15 and 30 minutes in all cases.

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Presented before the Section on Allergy at the 90th Annual Session of the California Medical Association, Los Angeles, April 30 to May 3, 1961.

TABLE 1.—Summary of Allergic Data on Patients with Vernal Conjunctivitis

Type of Examination	No. Examined	Positive	Questionable
Antibodies to grass pollen as demonstrated by:			
Direct skin test.....	29	16	5
P-K* test	30	10	0
Hemagglutination reaction	30	22	0
Major atopic disease found in:			
Personal history	27	13	1
Family history	26	16	1
Exacerbation in spring.....	26	17	5

* Prausnitz-Kustner.

Two groups were used as controls in the antibody studies. Twenty-six patients with seasonal hay fever served as positive controls. All had positive reactions to skin tests with grass, and 19 had hemagglutinating antibody to grass in their blood. Thirteen of the hay fever patients were hyposensitized to grass—ten currently, three having been treated in the past. (Current hyposensitization results in the formation of hemagglutinating antibody to grass in an allergic or nonallergic person.)⁷ The normal controls consisted of 60 persons, mostly children, who had no history of hay fever and who had negative reaction to skin tests. All hemagglutination tests in this group were negative.

RESULTS

Twenty-nine of the 30 patients were skin tested; 21 had skin-sensitizing antibody to grass as demonstrated by the intradermal direct skin test. In ten the reaction was strongly positive (+++ to +++++), in six it was moderately positive (+ to ++), and in five weakly or questionably positive (±). (See Table 1.) As might be expected, the ten patients who had positive reaction to the P-K test were among those who had moderately to strongly positive response to skin tests. However, hemagglutinating antibody was found in about the same incidence in the strongly, the moderately and the weakly positive groups. Twenty-two of the 30 patients had hemagglutinating antibody to rye grass in the blood. The hemagglutination test and its relation to vernal conjunctivitis and other atopic antibodies is discussed elsewhere.²

Personal or family history was considered "positive" only if there was report of one of the major allergic sensitivities. With the use of this criterion, 13 of 27 patients had a positive personal history and 16 of 26 patients had a positive family history. Over half of the patients reported that in the spring and summer they had definite exacerbation of the ocular symptoms—itching, lacrimation, photophobia and burning. The worst months were May, June and July.

Specimens of material from the conjunctiva were

examined in 15 cases and a significant number of eosinophils was noted in all of them. No disease was uncovered by culture of material from the conjunctivae and the eyelids.

Twenty-three of the 30 patients were under 15 years of age. The average age for those less than 15 was 8.4 years and the average age for all patients was 12.8 years. Twenty-five of the 30 patients were males, a preponderance that has been observed in almost all reports on vernal conjunctivitis.^{1,3,6} No endocrine peculiarity has been found to explain this phenomenon.

DISCUSSION

Clinical evidence in vernal conjunctivitis, as well as the presence of serum antibodies in persons with hay fever and not in normal subjects, would indicate that this disease is atopic. The correlation of positive reaction to skin tests, seasonal variation of disease and the presence of antibody to rye grass strongly incriminates grass as an etiologic or influencing factor in vernal conjunctivitis. Patients who did not have serum antibodies usually also had negative reaction to skin tests and had no seasonal variation of disease.

If vernal conjunctivitis is an atopic disease with grass pollen sensitivity as the etiologic or influencing factor, it is reasonable to assume that some cases would be caused by other atopic allergens such as house dust, animal danders or other perennial antigens. Pertinently, hay fever symptoms of sneezing, lacrimation, itching of the nose and rhinitis are not all from grass; house dust and epidermals also can be the cause.

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Acute Myocardial Infarction

Urine Glutamic Oxalacetic Transaminase Activity

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THERE IS general agreement as to the diagnostic value of serum glutamic oxalacetic transaminase (SGO-T) determinations in patients with diseases of the heart, liver and skeletal muscle.* The ultimate fate of the serum enzyme in the body is unknown. Since blockage of the reticuloendothelial system with India ink does not result in increased serum activity, sequestration of this enzyme in those cells is apparently not significant.³ Hill and coworkers⁴ measured the excretion of this enzyme in the bile of rats following intravenous injection of transaminase. In the control animals, very small amounts of transaminase were excreted in the bile intermittently, the total amount never being more than 80 units in 10 hours; none of the rats excreted more than 1 per cent of the injected transaminase or apotransaminase. Therefore, in rats, the bile does not appear to play a significant part in the excretion of transaminase.⁴ Dunn and coworkers² in experiments on normal mongrel dogs and dogs with artificially produced myocardial infarctions were unable to recover significant amounts of GO-T in the bile. The role of the kidney in the inactivation or excretion of this enzyme has been partially clarified. No measurable amounts of GO-T were detected in the urine of normal dogs after the intravenous administration of GO-T or in dogs in which myocardial infarctions were produced; it was not stated whether these determinations were made on 24-hour urine specimens or on fresh specimens. The rate of disappearance from the serum remained approximately the same in dogs without kidneys, indicating a lack of inactivation by the kidneys. Rosalki¹² found small amounts of lactic dehydrogenase (LD) and GO-T in the 24-hour urine specimens of normal persons and in three patients with acute myocardial infarction. However, in patients with acute renal disease, the urine LD to a moderate degree and the urine GO-T (UGO-T) to a lesser degree became elevated. Therefore, we sought to evaluate the activity of glutamic

• The urinary content of glutamic oxalacetic transaminase (UGO-T) was determined in 16 consecutive patients with acute myocardial infarction. In all of them it was above normal.

In some patients the UGO-T remained elevated for a longer period than did the blood content of that enzyme.

It is possible that in certain patients with acute myocardial infarction the kidneys eliminate significant amounts of GO-T.

oxalacetic transaminase in freshly voided urine of normal persons and of patients with acute myocardial infarction because these determinations had not been previously reported. The enzyme activities were determined by the spectrophotometric method.⁷ The urine pH did not influence the activity of the enzyme in the urine. However, the activity of the enzyme slowly disappeared on standing, the decreased activity becoming apparent after 30 minutes of standing. Hence the determinations were performed within 30 minutes of collection. This reduction in activity was not constantly influenced by moderate refrigeration, but the specimens could be frozen for 48 hours without loss of any activity. The decreased activity on standing apparently accounts for the small amounts of this enzyme detected in 24-hour specimens in both controls and patients with acute myocardial infarction reported heretofore.

There was no apparent relationship between the presence of enzyme activity and the presence or amount of proteinuria. Urine determinations were made on 59 control patients with no evidence of acute disease of the heart, liver, or skeletal muscle. Only one determination was over 9 units; in 14 consecutive controls, the mean determination was 5.5 units per ml. of urine per minute with a standard deviation of 3.1. Sixteen consecutive patients with acute myocardial infarction were evaluated by daily determinations of the UGO-T. As may be seen in Chart 1, the UGO-T activity was elevated in all of these patients with acute myocardial infarction. The peak levels varied from 17 to 53 units. There did not appear to be a linear relationship between the

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*References No. 1, 5, 6, 8, 9, 11, 13, 14.

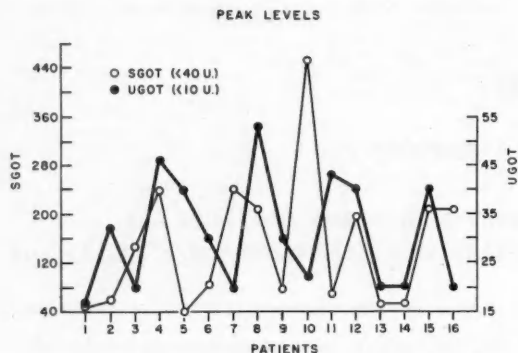


Chart 1 plots the peak levels of urine (heavy line) and serum (light line) oxalacetic transaminase activity seen in 16 consecutive patients with acute myocardial infarction.

height of elevation in the serum and in the urine. However, the charted curve of the content in the urine generally followed the curve of the serum content. The activity was usually elevated in the first 24 hours after infarction, reached a peak in 24 to 48 hours, and usually returned to normal in 72 to 96 hours. The UGO-T elevations were two to five times the upper limits of normal. Chart 2 depicts the duration of elevation of SCO-T and UGO-T. Although no clear-cut pattern is obvious, there is a tendency for the UGO-T to remain elevated for two to three days longer than the SCO-T.

REPORTS OF TWO CASES

The following case reports document many of the relationships mentioned above.

CASE 1. A 33-year-old white male physician had severe substernal chest pain at 1 a.m. An electrocardiogram was typical of a classical evolution of an acute transmural anteroapical myocardial infarction. The daily SCO-T and UGO-T determinations are shown in Chart 3. The UGO-T activity was elevated eight hours after the acute episode of chest pain and remained elevated for 20 days. There was no relation between the degree of elevation of UGO-T and SCO-T on any given day.

This case report demonstrates that the UGO-T may become elevated very early after a myocardial infarction, tend to follow the general course of the SCO-T, and remain elevated after the SCO-T has returned to normal.

CASE 2. A 44-year-old white man had acute myocardial infarction on June 25. As can be seen in Chart 4, the SCO-T remained elevated until June 30 while the UGO-T was still almost at the peak level on July 2, illustrating a tendency (noted in several patients) for the UGO-T and SCO-T curves to run parallel, but for the former to remain elevated longer.

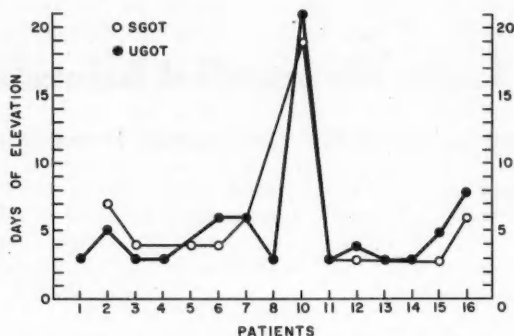


Chart 2 compares the duration of elevation of urine (heavy line) and serum (light line) glutamic oxalacetic transaminase activity in 16 patients with acute myocardial infarction.

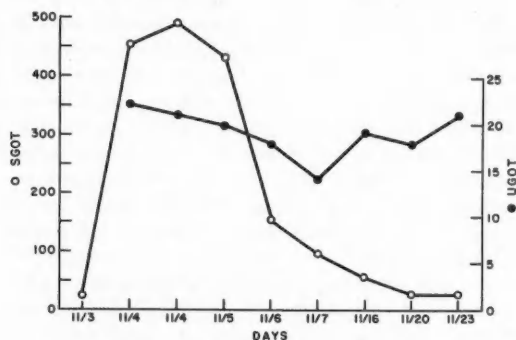


Chart 3 depicts the urine (heavy line) and serum (light line) glutamic oxalacetic transaminase activity in a patient with a severe myocardial infarction. Note that the UGO-T remained elevated for several days after the SCO-T returned to normal levels.

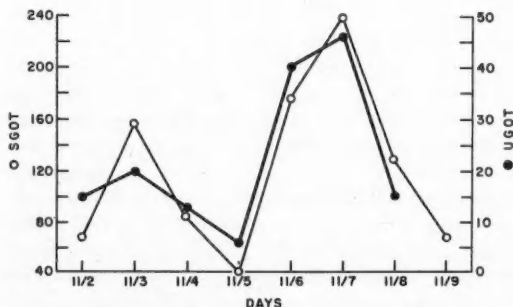


Chart 4 represents the pattern of the urine (heavy line) and serum (light line) glutamic oxalacetic transaminase activities in a patient with acute myocardial infarction. See text for discussion.

DISCUSSION

The diagnostic value of urinary GO-T determinations would appear to be obvious. The procedure is not only an additional method of diagnosing acute myocardial infarction without resort to multiple

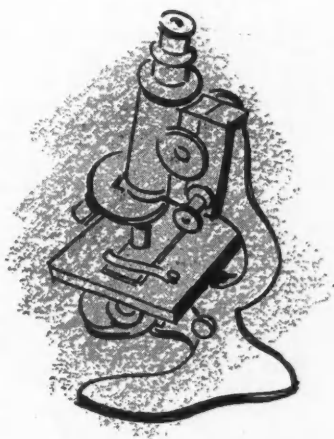
venipuncture, but in certain patients it may detect elevations after serum content of this enzyme has returned to normal.

It has been estimated that normal heart muscle contains 300,000 to 400,000 units of GO-T per gram of tissue and that 30 per cent may be lost during the first 24 hours after acute myocardial infarction;¹⁰ since peak levels of 40 to 50 units per milliliter of GO-T in the urine were detected in a few of the patients in the present series, if we may postulate a urinary output of about 1,500 milliliters, these patients may have eliminated 70,000 units of GO-T via the kidneys. Thus, contrary to previous reports, the kidney may in some patients excrete a significant amount of this enzyme.

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Milk Let-Down

The Use of Intranasal Oxytocin for Nursing Mothers

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MILK LET-DOWN or milk ejection is a forcing out of milk as a result of the action of oxytocin on the myoepithelial elements of the postpartum breast. Several investigators have found that only a part of the milk present in the mammary gland can be drawn out by suckling, and that the contractile system is necessary for the evacuation of milk from the alveoli and finer ducts.^{1,3,5}

The intramuscular administration of oxytocin has long been known to produce milk let-down in animals and humans.^{2,4,6} However, since new mothers are discharged from the hospital on the third or fourth postpartum day, at a time when lactation has only begun, a method of self-administration is necessary if exogenous oxytocin is to be used to increase the flow of milk. Hence a study was carried out to test nasal spraying as a suitable method of administration.

Of 100 nursing mothers dealt with in private practice in a period of 18 months, 50 were given a nasal spray preparation containing oxytocin (Syntocinon® 40 I. U. per cc.) to use at home. All patients, controls as well as subjects, received intramuscularly 5 units of Syntocinon a day for two days just before they began breast feeding, on the third and fourth days postpartum. Thereafter, the controls received no oxytocin by any means. In the early part of the study the patients using the spray were told to put it into each nostril while lying down, squeezing the container so that a sufficient amount of material was delivered to produce a droplet in the posterior pharynx. Later the patients were instructed to use the spray in the upright position, in order to obtain greater dissemination and absorption. It was estimated that this method supplied approximately 10 units of oxytocic solution in each nostril. The spray was to be used about 5 minutes before each feeding time.

Although no definite criteria were established beforehand for selecting patients for use of the spray, generally it was given to those who were apprehensive about their ability to nurse, those who had had or were having difficulty with the flow of milk, and

• A study was carried out to determine whether intranasal spraying with a solution of oxytocin was an effective way to increase flow of milk in mothers who wished to breast-feed their babies.

A hundred such women were given the drug intramuscularly for two days before they were to begin nursing. Then administration by that means was discontinued and 50 of the hundred were given oxytocin nasal spray kits for use at home. In general the patients receiving the spray kits were those who were apprehensive about sufficient lactation, those who had had previous difficulty and those who had flat, inverted or tender nipples.

Results were not much different between the 50 women who used the spray and the 50 controls, but since the former group included the "difficult" cases, some benefit may be attributed to the aerosol therapy. Ninety per cent of those who used it said they would be willing to use it again.

those who had flat, inverted or tender nipples. Engorgement of the breasts was not a frequent problem, apparently due to the intramuscular use of the oxytocin, and therefore was not often a factor in selecting patients who were to use the spray. The nursing mothers who had a free flow of milk by the time they were ready to leave the hospital, and whose babies were suckling well, usually declined the opportunity to use the supplementary oxytocin.

Intramuscular injection of 5 units of oxytocin after the flow of milk had been established produced drops of milk at the nipple in from 30 seconds to two minutes. When 10 to 20 units of oxytocin was delivered into the nasal mucosa by the spray, drops began to form at the nipple within three minutes, and by five minutes there was dripping of the milk from both breasts, although the greatest flow came from the breast not used at the previous feeding.

The responses of the nursing mothers to retrospective questions were, of course, subjective, but since the controls were as subjective as the patients who used the spray, the answers may be considered to have statistical value.

In this study, the controls showed a somewhat longer period of nursing, but this was due largely to continuance of breast feeding for many months

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Figure 1.—Breast of nursing mother, left to right, five, six and seven minutes after intranasal spraying with oxytocin solution.

by a few of the women in that group. Painful nipples are usually related to the time at breast and the availability of milk; the spray seemed to decrease this problem since the babies were not required to suckle so vigorously. There was no indication that involution of the uterus was hastened by the exogenous oxytocin, but in neither group was there evidence of subinvolution. Only a few patients objected to the sensation of the material running into the pharynx. One patient did complain of the residual taste.

A relatively high proportion of patients said they would breast feed again, and an even higher proportion said they would be willing to use the nasal spray again. Even though the possibility of using buccal tablets instead was suggested to them, they expressed no reluctance to use the spray method.

From data in Table 1 it is obvious that the differences between the two groups were relatively small, but since the patients who used the spray were less favorable candidates for nursing, we believe that use of the spray brought them to a condition approximating that of the control group. Moreover it was the author's impression that use of the spray greatly encouraged mothers who were apprehensive about their ability to nurse, particularly at the outset.

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TABLE 1.—Data on Effects of Oxytocin Nasal Spray by Nursing Mothers

	Those Who Used Oxytocin Spray	Controls
Number of weeks of nursing*	7.5	10.7
Minutes per feeding	30	28.6
Painful nipples	20%	25%
Average number of weeks of uterine bleeding	5	4.5
Painful uterine cramps	5%	5%
Local effects (mild) in nasopharynx	5%	-----
Improvement over previous experience (multiparae)	66%	-----
Would breast feed again	70%	75%
Would use nasal spray again	90%	-----

*Termination of nursing was almost always voluntary.

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Criminal Abortion

A Consideration of Ways to Reduce Incidence

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THE PROBLEM of criminal abortion shall remain essentially unchanged as long as we continue our current social attitudes, foremost among which is our refusal to speak about it. The intention of this presentation is to air the problem and its extensive ramifications in the belief that bringing it into the open is a prerequisite to solution.

It is apparent that abortion is part of our social mores although society steadfastly refuses to acknowledge this to be so. The taboo that is discernible surrounding illegal abortion is concerned more with talking about it than the actual act itself. It would appear that there is a rather direct derivation of attitudes concerning abortion from the prevailing attitudes towards sex in general. As an example, one might examine the position of masturbation in our culture. No one would deny its prevalence, nor could anyone deny the powerful silence that surrounds it.

Most persons, including those in professions concerned with the matter, react with amazement and disbelief when confronted with mounting evidence suggesting that one of every five pregnancies in this country terminates in illegal abortion. Difficult though it is to accumulate statistics on the subject, a surprising similarity has been noted in various studies made within the past 30 years.¹ If we are to accept the general trend observed, we have to consider the possibility that more than one million abortions will be done in the United States in 1960, and if we use Fisher's mortality estimate,² more than 5,000 women may die as a direct result.

The work of Gebhard, Pomeroy, Martin and Christenson,^{1a} of the Kinsey group, provided new and illuminating insights into many facets of illegal abortion. The sampling used in their study was not designed to be representative of the population of the United States. It is possible, nevertheless,

• The problem of criminal abortion in the United States is of enormous magnitude, both in terms of incidence and of resultant morbidity and mortality. Several studies suggest that one of every five pregnancies terminates in criminal abortion, or a total of more than one million abortions for 1960, with a possibility of more than 5,000 deaths resulting therefrom.

The inadequate laws regarding therapeutic abortion in most jurisdictions contribute much to the problem. Tracing the origins of these laws provides additional clues concerning the development of this enigma.

Suggested answers to the problem include: (1) Broadening and clarifying therapeutic abortion laws to reflect current medical practice, yet provide stringent controls; (2) prevention of unwanted pregnancy through consultation centers for women, encouragement of contraceptive research and education of the public.

to discern certain meaningful trends, mostly representative of our urban population of higher educational attainment.

Some of the highlights of the Kinsey group's study were: (1) One of every three to four women having live births had one or more abortions; (2) the higher the educational level, the greater the tendency to seek abortion; thus white and negro unmarried women with a college education were found to have the highest abortion rate—well over 80 per cent; (3) illegal abortion is more a problem of married women having several children, contrary to the popular notion that it mostly involves illegitimate pregnancy. The more pregnancies a woman has had, the more likely she is to seek abortion. This agrees with the findings of Kopp^{1c} in her study which was done 25 years earlier (see Figure 1); (4) a lower abortion rate was found in women relatively active in their religious groups.

Gebhard and coworkers were able to demonstrate that induced abortion did not result in the ill effects that had been so generally assumed by others. Statistically their material gave no evidence of any resultant sterility or damage to capacity for achieving orgasm. Other physical and psychological after-effects appeared less frequently than had been previously supposed. Preliminary findings

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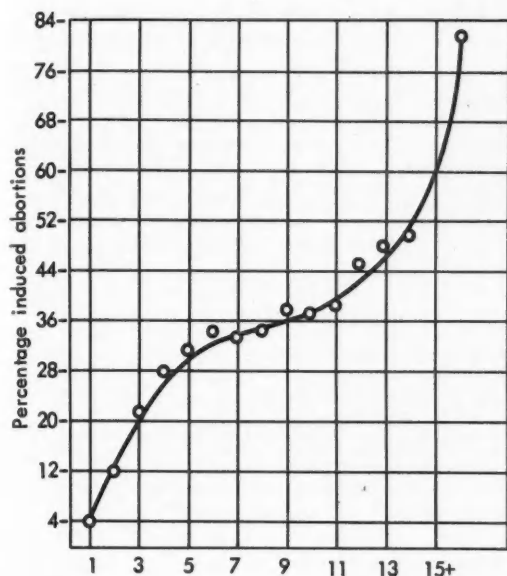


Figure 1.—Percentage of pregnancies terminating in induced abortion according to order of pregnancy, the numbers across the bottom indicating the number of pregnancies (after Kopp^{1c}).

of a study we are currently involved in suggest that moderate or severe psychiatric sequelae of induced abortion are indeed rare, most psychiatrists queried having encountered either none or very few cases—an insignificant figure when compared with the number of postpartum psychiatric illnesses, which, in a previous study by one of us,³ was found to account for 2 per cent of female admissions to mental hospitals, or one in 500 births.

If the ill effects of induced abortion have been so grossly exaggerated, we must ask ourselves why. Might the answer be that this was part of the means of enforcing the taboo?

Induced abortion can be traced back as far as recorded history. It has been found in all societies with only very rare exceptions. The reasons for abortion have been legion, ranging from superstition and vanity on the one hand to very real physical and economic pressures on the other.

Our legal position can be traced to the Judaeo-Christian tenets; but our social attitudes, with all their contradictions appeared as far back as Hippocrates, who, although he exhorted against prescribing abortifacients, is recorded as having directed a rich entertainer, burdened with an inconvenient pregnancy, to leap into the air seven times with such vigor that her heels should touch her buttocks; and upon her doing this, the conceptus "fell onto the floor with a plop!"⁴

The foregoing contradiction is regularly reflected in current medical attitudes and behavior. While very few physicians are believed to be engaged in the performance of illegal abortions, a good many refer patients to illegal abortionists indirectly, and some directly, even in writing.⁵ Although the majority of physicians probably have a reasonably tolerant attitude toward this practice, most of them scrupulously refuse even to discuss abortion with their patients. As Timanus⁵ said, society "abandons the woman in her greatest need."

LAWS GENERALLY DISREGARDED

This contradiction is further reflected in our society as a whole and more specifically in our legal institutions, as will be described later. Although criminal abortion is labeled a felony, the abortees are almost never prosecuted and for professional abortionists the rate of prosecution is low and the rate of conviction even lower.⁶ It is apparent that morals, religion and the criminal law offer little restraint when it comes to abortion, leading Taussig to remark that he knew "of no other instance in history in which there has been such frank and universal disregard for criminal law."^{1b}

Guttmacher⁷ states unequivocally "that the abortion laws in the United States make hypocrites of all of us." More than 90 per cent of the therapeutic abortions done at Mount Sinai Hospital in New York City did not fall strictly within statutory requirements "to preserve the life of the mother." Hospital authorities and physicians vary widely in their interpretation of the laws and their willingness to place themselves in jeopardy of prosecution. In a recent survey of California hospitals, 18 of 24 replied that therapeutic abortions were performed knowingly in violation of the law.⁸

Most physicians have conflicting feelings about recommending abortion to preserve the health of the patient. Physicians are entitled to laws that reflect current medical practice and opinion, in which "preservation of the mother's health" is accepted as indication for therapeutic interruption. If there was ever any doubt as to physicians' acceptance of criteria short of saving the mother's life, one has only to consider the question of rubella during early pregnancy (without wishing to become involved in the dispute over the incidence of congenital defects). When it was thought that a high incidence of defects occurred, the acceptance of this disease as a proper indication was quite generally held. Yet how could that possibly be construed as preserving the mother's life?

THE LAW OF CRIMINAL ABORTION

In general

"The law of this land has always held human life to be sacred, and the protection that the law gives to human life it extends also to the unborn child in the womb. The unborn child in the womb must not be destroyed unless the destruction of that child is for the purpose of preserving the yet more precious life of the mother."

The foregoing, which was excerpted from Mr. Justice Macnaughten's instructions to the jury in *Rex v. Bourne*⁹ (1938) is a general statement of the law of criminal abortion as it now exists throughout most of the United States and a great part of the western world, including France, West Germany, Great Britain and most of the British Commonwealth nations. Latin American laws are somewhat more relaxed; there, mental deficiency, danger to a woman's health and pregnancy from sex offenses are lawful indications for therapeutic abortion. The Scandinavian nations, with Sweden leading, have for many years allowed even broader indications for therapeutic termination of pregnancy, going so far as to include eugenic reasons (severe hereditary taint), socio-medical grounds, and pregnancy in very young girls. Japan and the Soviet Union not long ago fully legalized induced abortion, providing that only skilled medical practitioners could perform the operation. This paper will not discuss in detail the attempts of foreign countries to deal with the abortion problem, but interested readers are directed to Gebhard,¹⁰ Calderone¹¹ and numerous other studies published in the United States.¹²

IN THE UNITED STATES¹³

The procurement or attempted procurement of an abortion by any means whatsoever has been declared in every state in the Union to be a felony. Each jurisdiction, however, has in one form or another an exception to the harsh prohibitory law (Table 1).

Statutory exception never interpreted in United States

In none of the forty-two states having the narrow exception has a court of law ever defined the scope of the words "to preserve the life of the mother." There is no legal precedent in any of these states giving assurance that preservation of a woman's health would be justification for inducing an abortion. On the other hand, although almost all therapeutic abortions are to protect the woman's health and are in clear violation of the law, there are no known prosecutions of licensed medical practitioners who, before terminating pregnancy, obtained either concurring medical opinion as to the

TABLE 1.—Legal Exceptions to Laws Prohibiting Abortion

	No. of States
To preserve life of mother.....	42
To preserve life or health of mother.....	3①
To save life of mother or to prevent serious or permanent bodily injury to her.....	2②
When physician is "satisfied that the fetus is dead, or that no other method will secure the safety of the mother."*	1③
Statute requires for violation that act be done:	
"Unlawfully"*	2④
"Maliciously or without lawful justification"*	1⑤
Total jurisdictions	51

① States: Alabama, Oregon, Washington, D. C.

② States: Colorado, New Mexico.

③ State: Maryland.

④ States: Massachusetts, Pennsylvania.

⑤ State: New Jersey.

*The few cases available indicate that these statutes would be applied liberally and reasonably to a licensed medical practitioner acting in good faith to preserve the life or health of the mother.

necessity of therapeutic abortion or permission from hospital boards.¹⁴

British court interprets statutory exception

There is but one noted judicial interpretation of the narrow exception, and that is to be found in the charge to the jury sitting in the famous English case of *Rex v. Bourne*.⁹

Dr. Alec Bourne, a leading obstetrician, openly and without fee, performed a therapeutic abortion on a 14-year-old girl who had been impregnated as a result of forcible rape by several soldiers. Dr. Bourne sought arrest and trial in order to obtain clarification of the law. He maintained that the girl would have become an emotional wreck if compelled to bear the child, and that a woman whose health is threatened by pregnancy should not have to be in the jaws of death before abortion could be lawfully performed. The court sustained the defense and the judge's instructions to the jury remain as the highest interpretation of the English statute, which specifies that abortion can only be performed to preserve the mother's life. The Bourne case has not been followed in the United States, as British judicial interpretation is only persuasive authority and not binding on American courts.

One cannot discuss the law of abortion without taking into account the historical moral and religious objective of protecting the unborn child, for this continues to be a major factor accounting for the law as it is today.¹⁵

Induced abortion considered immoral

There seems to be no doubt that in our present-day society a certain compassionate sympathy attaches to the potential child growing inside its mother, this sympathy increasing as the fetus becomes more human in form. Many regard its

subsequent destruction as being morally equivalent to murder, and as depriving the child of its inalienable right to live.¹⁵ In addition, it is said by some commentators that broadening the abortion laws would encourage and give free license to illicit sexual intercourse, while others look upon the mere discussion of abortion as obscene.¹⁵ American courts by and large seem to regard interference with propagation as a moral question involving a crime against nature.¹⁶

Religious background

Although induced abortion has been practiced by man for thousands of years, unequivocal moral and legal antipathy to abortion originated with the Hebrews, who were exhorted by God "to be fruitful and multiply."¹⁷ The early Hebraic law underwent a gradual change until the renowned Spanish rabbi, Maimonides, provided, in his comprehensive code-book of Jewish law in 1168 A.D., for therapeutic abortion under the heading of self-defense.¹⁸ When a woman's life was endangered by pregnancy, according to Maimonides, the fetus might be destroyed just as an attacker could justifiably be killed in self-defense. Although a current, authoritative "Jewish view" on therapeutic abortion would be difficult if not impossible to ascertain, there being no central religious authority for the Jews throughout the world, it is submitted that most contemporary Jewish Talmudic scholars do not consider the present law too liberal, and, by and large, probably would not strongly oppose a cautious broadening of the legal exception to the abortion statute.¹⁹

Protestantism, for the most part, is not opposed to the present exception to the prohibitory law, most Protestant authority holding that termination of pregnancy is not a problem for the church but should be handled by the physician, the individual patient and her clergyman, with primary consideration being given the mother.²⁰

Catholicism, on the other hand, provides that any direct attack on the fetus is murder,²⁰ this attitude having been taken over unmodified by Christianity from early Judaism.²¹ The Catholic physician has both the mother and the child as patients, and each has an equal right to live; he must attempt to save them both, and cannot choose between saving one or the other or of killing one to save the other; neither the physician nor the mother has the right to make such a choice.²⁰ Furthermore, to allow therapeutic abortion in some cases might encourage laxity, and it is better to have a few deaths from not inducing abortion than to have thousands of lives intentionally destroyed in the womb.²⁰ An evil action directly performed, it is held, is never lawful even though done to

produce a good result, and it is also sinful to administer otherwise innocent medical treatment with the intention that miscarriage result. The double effect theory provides, however, that if termination of pregnancy is merely "permitted to follow" from some absolutely necessary (medically) innocent act, the effect of which is in itself good, then that original act is not sinful. Examples of the application of this theory would be the surgical removal of a pregnant uterus for malignant ovarian tumor or an operation to control hemorrhage during pregnancy. In such cases the physician would intend to remove the cancer or to control the hemorrhage, and the indirect death of the fetus would only be "permitted." It should be noted, however, that in practice the double effect theory is rarely applied.²²

OBJECT OF THE LAW IS TO PROTECT THE MOTHER

It is to be noted that although the historical objective of the law was to protect the unborn child in the womb,¹⁵ modern interpretation clearly gives just as much if not more consideration to the health and safety of the mother. This is indicated by statute and case law in most jurisdictions in the United States.¹³ Initially, the basic exception to the prohibitory law places preservation of the mother's life over that of the fetus.²³ Secondly, not only is the woman-abortee almost never prosecuted,²⁴ but the law allows her immunity from prosecution as an accomplice when her testimony is needed to convict the abortionist.²⁵ In addition, an attempted abortion is sufficient to fall within the substantive felony statute; miscarriage need not even result.²⁶ Furthermore, it is not even an element of the prosecution's case that the woman was in fact pregnant; it is enough that the abortionist believed her to be pregnant and performed an act upon her with the intention of terminating the pregnancy.²⁷ Thus, it is clear that the primary goal of the law today is to prevent death or injury to the mother. One might then ask: Is society in fact protecting the mother's welfare by maintaining stringent laws which drive her to illegal abortion? Is there not a lesson to be learned from the days of prohibition, when the indirect evils of the law far exceeded the evil at which the law was directed?

A fundamental requirement of reform is modification of the present unenforceable laws. Criminal abortion is undoubtedly stimulated by the pressure of these stringent laws, and also by having them loosely enforced. The needs of society have molded the law of abortion, through jurisprudential evolution, so that it tends to protect the health and safety of the mother; yet the severity of this law at the same time drives the very object of its protection

into the hands of the unskilled abortionist. Thus, maintaining statutes which do not receive public sanction and observance is detrimental to society, and further the weight of public opinion most probably favors a cautious relaxation of the present abortion laws. As has been seen in the Scandinavian countries, however, liberalizing the law will not completely eliminate illegal abortion as long as there are any restrictions at all, for no legislative decree will ever prevent unwanted pregnancies in women who cannot qualify for lawful abortion, yet are determined to abort. But this is certainly no reason for abandoning all attempts to prevent widespread termination of pregnancy by unskilled hands.

Criminal law cannot undertake to draw the line where religion or morals would draw it.²⁸ A substantial body of medical judgment and public opinion favors cautious relaxation of the law; and believes it is wrong to impose criminal punishment upon decent people in the name of morality.

Law inadequate for physicians

Qualified physicians, particularly obstetricians and gynecologists, cannot operate honestly within the framework of current abortion laws. The legal threat of prosecution pursuant to these laws hangs over their heads when in reality the community has no intention of punishing medical practitioners acting in good faith. The present statutory standard does not adequately answer the questions of physicians who decide that induced abortion is necessary for a patient. Hence, they are often uncertain about the consequences of terminating pregnancy. It is submitted that the law be brought into closer conformity with public need and the practices of reputable members of the medical profession; and, that the statute clearly set out what constitutes lawful therapeutic abortion, in order that physicians and surgeons have a good base for sound medical judgment.

SUGGESTED INDICATIONS FOR THERAPEUTIC ABORTION

The following legal guideposts for the medical profession are advocated by the authors and were concurred in by the 1960 Los Angeles County Grand Jury in its resolution to the California Legislature:

1. *Medical reasons*—Where termination of the pregnancy is necessary to preserve either the life or health (mental or physical) of the mother.

2. *Eugenic reasons*—Mental deficiency of the parents or the probability that a congenital disease or malformation will be passed on to the child.

3. *Humanitarian reasons*—Pregnancy occurring as a result of rape, incest or moral irresponsibility

of the female (very young or mentally incompetent).

An abortion statute embodying these ideas, with controls against possible abuses, has been drafted and submitted (by Mr. Leavy) to the 1961 California Legislature for its consideration.

Effective, uniform and realistic abortion laws should go far in our efforts toward greatly reducing illegal abortions. We should not be deluded into believing that the problem can be eradicated; but certainly substantial inroads can be anticipated, particularly with the organized help of the medical profession, which until now has only given lukewarm support because of the lack of sufficient alternatives in legal channels.

Stringent controls should be provided which would tend to broaden the base of responsibility and reduce the probability of abuses.

1. *Medical and eugenic reasons*—Such controls to be incorporated into the various state laws may well follow the model recommended by Packer and Gampell of the Stanford Law School.⁸ This, in essence, would allow performance of therapeutic abortions by licensed medical practitioners in licensed hospitals. To qualify, a hospital would be required to maintain a regularly-meeting therapeutic abortion committee composed of at least two obstetricians, one internist, one psychiatrist and a fifth person; only when a majority believed termination of pregnancy to be "medically advisable" would therapeutic abortion be permitted. The use of hospital review boards has gradually developed out of need to spread the responsibility and obtain objective decisions for terminating pregnancy. This system has proved successful, and by and large, the decisions of review boards have been found to be less lenient than those arrived at by other methods.²⁹ It is submitted that imposition by law of this method of control is a necessary concomitant to broadening the abortion law.

2. *Humanitarian reasons: Jurists to determine facts*—Where pregnancy results from rape or incest, or from moral irresponsibility in the very young, the feeble-minded or other incompetents, and there are no medical indications for therapeutic abortion, it is submitted that the question of terminating pregnancy under a statutory exception should not be placed before a hospital committee or other medical authorities, but instead properly rests with local legal authority. Such a decision must necessarily be based upon a finding of fact as to the good faith of the mother's claim of forcible rape, statutory rape or incest, and should lie with a juridical trier-of-fact rather than in the confines of sound medical judgment. A magistrate or judge of a criminal court, for instance, after

hearing the prosecution's *prima facie* case to determine if a defendant shall be held for trial on a sex offense, might be empowered by the legislature to decree, upon request of the pregnant victim, that she be allowed an abortion. Furthermore, in cases where the defendant is not yet apprehended, the pregnant victim should be entitled to prove the facts of the sex offense in a brief civil proceeding, in order to obtain the same relief.³⁰

PREVENTIVE MEASURES

Preventive measures are as important in dealing with criminal abortion as with any other medical problem. Suggested measures are:

1. *Consultation centers* similar to those in existence in Sweden where women with unwanted pregnancies may go for help. Social workers would be able to counsel women contemplating abortion. Most women contemplating abortion report a lack of anyone with whom these problems could be openly and honestly discussed. It is conceivable that with experienced counseling these women might ultimately find that they might wish to continue pregnancy to term. Other functions of such a center would include consideration of adoption, pointing out dangers of illegal abortion, and possibly aid to some clients in securing legal abortions and rendering whatever social service assistance that may be required at that period of stress.

2. *Research* should be stimulated and supported toward developing the "ideal" contraceptive—simple, acceptable and completely effective.

3. *Education of the public*—Sex instruction of children at levels understandable to them (and similarly for adults) is necessary to implement our goals. Such education must be thorough and continuous and include information on contraceptives, concepts of planned parenthood, therapeutic abortion, and criminal abortion with its possible attendant dangers.

It is worth stressing the importance of exposing the problem of criminal abortion, its extent, dangers and suggested remedies. It would have been impossible to make any strides in the fight against cancer, tuberculosis and venereal disease without bringing them into the open. Similarly, it is believed that our success in the campaign against criminal abortion will be directly proportional to the extent that the problem is aired. If the medical profession fails to assume the leadership in this campaign, it will be only a matter of time before an informed citizenry will cry out and demand the necessary changes in law. How many women must we allow to endure needless suffering and death in that precious interval of time?

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CASE REPORTS

Acute Appendicitis with Radiopaque Appendiceal Lithiasis in a Child

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THE INTERPRETATION of acute abdominal pain in childhood is always challenging. Since suspicion of acute appendicitis is probably the commonest reason for laparotomy in children, the following case is presented as an oddity in which an x-ray film of the abdomen showed a radiopaque intra-appendiceal coprolith in the right lower quadrant, an entity becoming more frequently recognized.

REPORT OF A CASE

A 12-year-old white boy was admitted to the hospital after about 12 hours of severe abdominal discomfort. At first diffuse, the pain was later centered in the right lower quadrant. Immediately before admission he had vomited. The oral temperature had risen to 100° F. Bowel movements had been normal. The patient had a history of nasal allergic disease and of many episodes of bronchitis. Twice he had had pneumonia. He had no idiosyncrasies as to food and was not particularly selective in his diet. His appetite had always been good. No previous history of gastrointestinal distress was elicited.

In the father's family there was strong history of allergic sensitivity, and history also of diabetes, heart disease and cancer. The patient's mother had had laparotomy as a child and her appendix had been removed at that time. Later, however, it was found that a right ureteral calculus had probably caused the symptoms that led to the operation.

When examined at the time of admission, the patient had oral temperature of 100.2° F. and the mucous membranes of the mouth and nose were dry. Lymph nodes in the cervical and inguinal areas were of a shotty firmness. Upon examination of the abdomen, guarding over the right lower rectus muscle was noted, but there was no involuntary spasm. Rebound tenderness was elicited at McBurney's



Figure 1.—Stone at right iliac crest and distended loop of small bowel on left.

point. Peritoneal irritation was demonstrated by referral of pain from left to right. There was no costovertebral angle tenderness. Digital pressure inside the rectum caused discomfort on the right side. No hernias or masses were discerned.

The hemoglobin content was 12.7 gm. per 100 cc. of blood, and the hematocrit was 41 per cent. Leukocytes numbered 16,300 per cu. mm.—94 per cent neutrophils, 5 per cent lymphocytes and 1 per cent monocytes. The urine was yellow, alkaline and negative for sugar. The specific gravity was 1.030. On microscopic examination an occasional pus cell was noted. In light of the history of calculus formation in the mother, an x-ray film of the abdomen was taken and a laminated calculus was seen in the medial portion of the right iliac crest, lateral to the normal site of a ureter. In addition there was a loop of small bowel distended with gas in the left lower quadrant. Roentgenograms were repeated to rule out a shadow from a garment or a button. The second examination showed that this density was not fixed, for it was lower in the upright projection. The study was interpreted as evidence of peritonitis with an opaque calculus outside the ureter and related either to the gallbladder or appendix (Figure 1).

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At operation a moderate amount of thin cloudy-yellow fluid was noted and there were several distended loops of small bowel. The appendix was engorged, edematous and suppurative. A stone was impacted in its base. No perforation or gangrene was grossly evident. A culture of the peritoneal fluid showed no growth.

The pathologist reported the appendix 6.3 cm. long, distended and having an obstructing fecalith 1.4 cm. in diameter in the proximal one-third. The serosa was pink and granular. The lumen distal to the obstructing fecalith was filled with hemorrhagic and purulent material and there was erosion of the mucosa from pressure caused by the stone. The diagnosis was: "Acute hemorrhagic and ulcerative appendicitis with large fecalith formation." X-ray films of the specimen were made (Figures 2 and 3).

DISCUSSION

An analytical review of this entity was presented in 1951 by LaForet, Greenler and O'Brien.⁹ They reported the sixty-second case in the American literature and noted that there were another 50 or so in the foreign literature. An additional 102 cases form the basis of the conclusions in this report.* The first reported case was that of Weisflog¹⁵ in 1906.

It is doubtful whether an accurate estimate of the incidence of opaque stones in the appendix can ever be made, for it is not common practice to obtain x-ray studies of the abdomen in every case of suspected acute appendicitis. It has certainly become less rarely diagnosed as more patients with obscure abdominal pain are better studied. Deposition of radiopaque calcium salts in appendiceal fecaliths, which are not infrequent, requires a special set of chemical circumstances superimposed on a stage set by chronic inflammation. The incidence of true calculus, a calcified coprolith, has been estimated to be as rare as 1:2000³ in acute appendicitis, whereas calcium salts opacifying fecaliths per se may be much more common. Because of the time factors in the deposition of radiopaque salts and for the accretion of a calculus, most of the cases occur after the second decade of life. In the 31 cases in which age was mentioned in one review,⁹ there were only two girls, age 2 and 6 years, and two boys age 11 and 13 years.

Other reports† totaling 102 cases show a predominance of males (2:1) in all age groups. Less than half of the patients were below age 20. Among the children sex distribution was equal.

The site of the lesion is not of much diagnostic help, for the appendix may be almost anywhere in the abdomen—the pelvis, the lower right quadrant, the area of the lower pole of the kidney, adjacent to the gallbladder or on the left side, in the left lower



Figure 2.—X-ray film of specimen in *in situ* position.

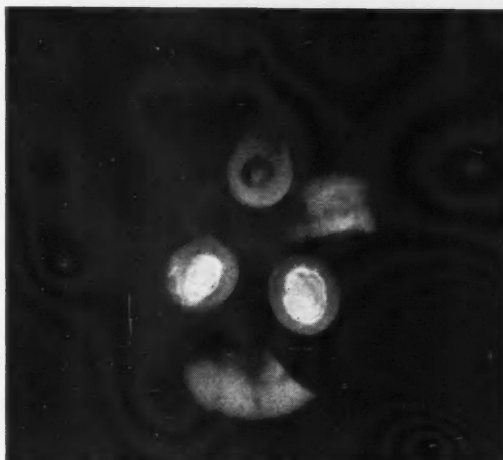


Figure 3.—X-ray film of specimen to show laminated structure.

quadrant.^{2,6} Opaque calculi have been seen in all these positions. The number of stones is also of no diagnostic help, for although usually single, as many as 23 have been seen.¹² They may have odd shapes and various sizes ranging up to 1 x 2 x 4 cm.³

Although stones formed in the gallbladder in hemolytic diseases in children are largely of the pigmented type and are usually multiple, they occasionally calcify and must be considered in the differential diagnosis of opaque intra-abdominal calculi in this age group. Gallstone ileus is a consideration in older age groups.

The presence or absence of hematuria may not differentiate this condition from right ureteral calculi, for sometimes with a ureteral stone there is no blood in the urine and sometimes with an acute appendix (with or without a calculus) near or on the ureter, bleeding may be incited. Intravenous

*References 1, 2, 4, 5, 8, 10, 11, 13, 14.

†References 1, 2, 4, 8, 14.

pyelography may show stasis when the swollen appendix is near the ureter, and in some cases the lumen may be so reduced as to prevent retrograde passage of a catheter.⁹

Other opaque abdominal objects include calcified lymph nodes, calcifying ovarian carcinoma, teeth in a dermoid cyst of the ovary, calcifying uterine fibroids, phleboliths and enteroliths. Also, foreign bodies lodged in the appendix may appear to be impacted calculi, and some kinds of tablets in the digestive tract will cast a shadow. Calcifying hematomas of the abdominal wall or tuberculous enteritis are further possibilities.

When an intra-abdominal stone is observed unexpectedly in a routine x-ray examination of an asymptomatic patient, the most important consideration is whether to carry out a prophylactic appendectomy. Experience cited in the literature emphasizes that appendicitis accompanied by calculi is very virulent.* In more than half of the cases in which there were symptoms at the time of examination, perforation occurred, with a high incidence of intestinal obstruction, peritonitis and death. Because "the demonstration of appendiceal lithiasis affords the only criterion whereby an individual's susceptibility to acute appendicitis may be predetermined,"¹⁰ the removal of such a latent threat cannot be reasonably questioned even though there be no symptoms at the time.

SUMMARY

A case of radiopaque appendiceal lithiasis causing acute appendicitis in a child is reported.

The important facets of this oddity are analyzed and provide a basis for sound clinical management.

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Plastic Repair Following the Removal of Large Desmoid Tumors of the Abdominal Wall

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CLOSURE OF THE abdominal wall following excision of large desmoid tumors frequently presents a formidable problem, for radical resection must be done even though it entails removal of large portions of normal muscle and fascia. Although metastasis does not occur, tumors of this kind cause death by invasion of contiguous tissue. If the tumor invades the peritoneal cavity, sacrifice of the involved viscera is mandatory.⁴ To "shell out" a desmoid tumor would be considered inadequate by modern standards.³

The purpose of the present report is to encourage a more aggressive surgical approach in such cases by describing plastic closures of large defects of the abdominal wall following excision of desmoid tumors in two cases in which the only other method of closure would have necessitated the use of onlay grafts.

The procedure used was a variation of the Halsted modification of the Bloodgood operation for repairing large inguinal hernias.^{1,2} It may be of value to reintroduce the concept of using the anterior rectus fascia as a flap to cover defects in the abdominal wall. By so doing, even if the entire anterior rectus sheath and muscle on one side are sacrificed, it is possible to secure a strong closure without leaving a defect that would make a hernia inevitable.

REPORTS OF CASES

CASE 1. A 35-year-old woman had a carrot-shaped mass palpable in the abdomen to the left of the umbilicus and extending from a point 2 cm. below the costal margin to 7 cm. above the pubis (Figure 1a). The tumor became more prominent when the abdominal muscles were tensed, and it was thought to arise within the substance of the left rectus muscle. A preoperative diagnosis of a desmoid tumor was made.

Operative Findings and Procedure

A long vertical incision was made directly over the palpable mass. Upon further dissection, the

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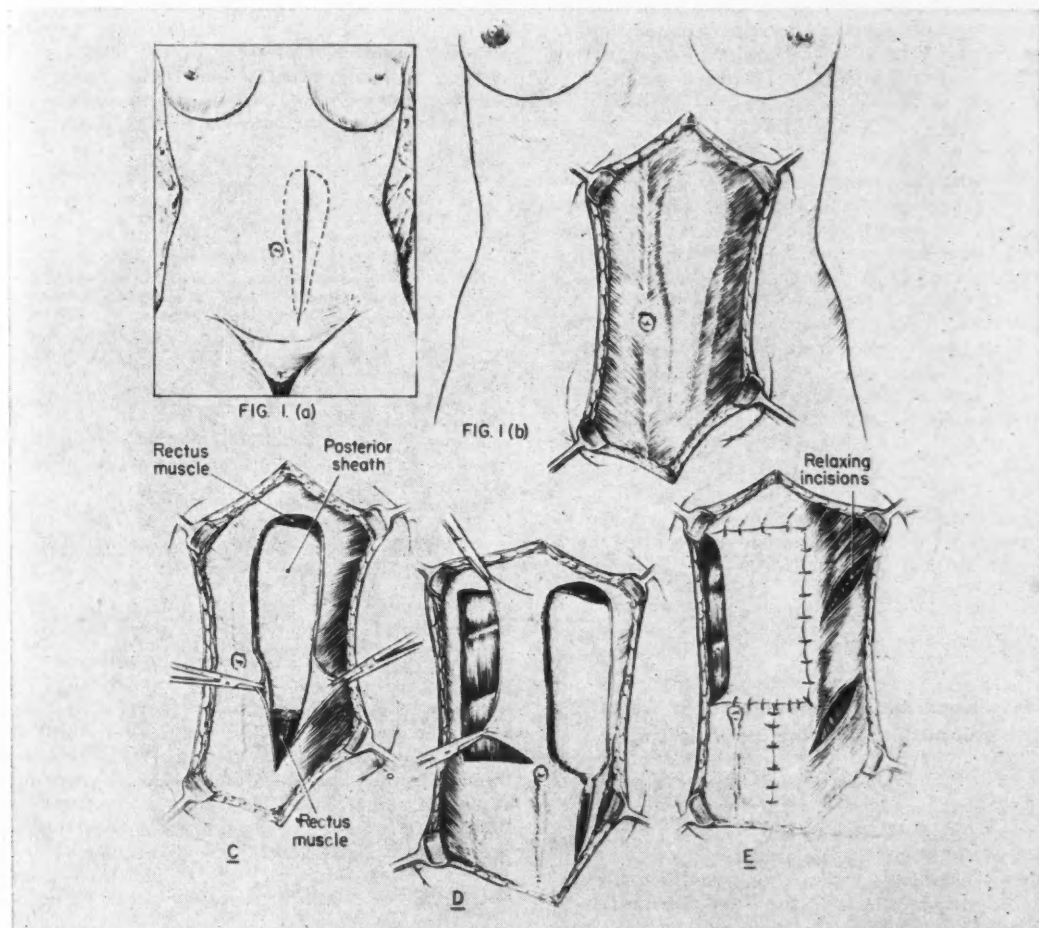


Figure 1.—(a) Incision and underlying tumor; (b) C, D, E, Excision of tumor and closure of defect in abdominal wall with contralateral flap of rectus sheath.

tumor was observed to be invasive, replacing almost all the left rectus muscle. The upper one-half of the anterior rectus sheath was incorporated in the tumor process. Except for the lower 5 cm., the entire left rectus muscle was resected, leaving the anterior fascia attached to the specimen at the upper portion. The resulting 12 x 6 cm. defect in the fascia was closed by the Halsted maneuver. The subcutaneous tissue overlying the upper one-half of the right anterior rectus sheath was undermined and the fascia was incised at its lateral border. This flap, still attached at the linea alba, was reflected medially and sutured to the left lateral abdominal musculature where the musculature joined at the semilunar line. Tension was taken off this suture line by relaxing incisions placed further laterally in the external oblique muscle. The steps in the operation are shown in Figure 1. The pathological diagnosis was: desmoid tumor of the rectus muscle.

Recovery was uneventful. For six months the patient had some difficulty when rising to a sitting from the recumbent position, but thereafter the abdominal musculature was as strong as before. No evidence of a hernia or recurrence of tumor developed in the next two years.

CASE 2. A 26-year-old woman had a firm mass in the abdomen, apparently within the left rectus muscle and extending from the costal margin to the umbilicus. The preoperative diagnosis was desmoid tumor.

All of the left rectus muscle and anterior sheath superior to the umbilicus was excised and closure was carried out in a manner similar to that employed in Case 1. The pathological diagnosis was: Desmoid tumor of left rectus muscle.

A wound hematoma was evacuated on the seventh postoperative day, following which the patient made

an uneventful recovery. At no time was weakness of the abdominal wall demonstrated, and no recurrence or hernia appeared in a period of four years.

DISCUSSION

The surgical procedure described in these cases leaves a portion of the abdominal wall supported by only the rectus muscle on one side and only anterior rectus sheath on the other. I have successfully repaired huge incisional hernias by the same method without resorting to the foreign body prostheses that are now in vogue. In view of the infection and recurrence rate of incisional hernias repaired with metal, cloth, or plastic grafts,^{5,6} it would appear that the surgical procedure herein described should have wider application.

SUMMARY

Large defects of the abdominal wall, created by resection of desmoid tumors were repaired by a hinged flap of anterior rectus sheath from the

opposite side. The rectus muscle alone and the anterior sheath alone have provided a strong abdominal wall without herniation. The procedure was merely a variation of Halsted's modification of the Bloodgood operation for repair of large inguinal hernias.

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Convulsions and Papilledema in a Child With Idiopathic Hypoparathyroidism

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IDIOPATHIC HYPOPARATHYROIDISM often is first manifest by neurologic disturbances even though metabolic derangements form the bases for the typical signs and symptoms. Clinically, most of the symptoms of hypoparathyroidism are caused by a deficiency of calcium ions in the cellular environment with accentuated neuromuscular excitability, including convulsions, tetany, tetanic equivalents, muscle cramps, dysarthria, laryngeal spasm or stridor. In untreated patients with long standing disease, cataracts, papilledema and dental abnormalities occur in addition to psychosis and mental retardation. Thus, emphasis must be placed on early diagnosis and institution of treatment.

REPORT OF A CASE

The patient was referred to the U.C.L.A. Pediatric Clinic in March, 1959, at 3 years of age. He had been in good health and had had normal birth, neonatal course and subsequent growth and development. Dragging of the right foot began at 16 months and was followed by progressive bilateral ataxia of the lower extremities. Seizures of increasing severity

and frequency occurred at 2½ years of age and ataxia became more severe, with involvement of the right upper extremity. One month before admission to the clinic, a pneumoencephalogram and results of spinal fluid examination at another hospital were reported as normal. An electroencephalogram showed a generalized hypersynchronous pattern. Anticonvulsant therapy had been given without improvement. In June, 1959, blurring of the optic discs developed.

Upon physical examination on admission to the hospital the patient appeared to be heavily sedated, and spasticity of all extremities and persistent positioning of the right hand were noted.

Diagnoses included a diffuse sclerosis with cerebellar degeneration, papillitis and cerebromacular degeneration. Results of examination of the blood and urine were within normal limits. Roentgenograms of the skull and chest were interpreted as normal but conditions consistent with periodic arrest of growth were observed in studies of the long bones. Pneumoencephalogram and ventriculogram studies were normal. No abnormality was noted on cerebrospinal fluid examination. Three electroencephalograms were severely abnormal, showing hypersynchronous diffuse slow wave activity. One normal tracing was obtained before the patient was discharged. Results of other laboratory examinations are listed in Table 1.

Seizures, ataxia and papilledema gradually disappeared but two months after the patient was discharged, incoordination of the hands and hyperactivity recurred. Then, after another month, mild blurring of the optic discs developed again. An

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TABLE 1.—Results of Blood, Spinal Fluid, and Urine Examinations in Hospital

Test	Periods in Hospital			
	June 11 to July 14, 1959	November 6 to 25, 1959		
		Date of Test		
		November 6	Other	November 25
BLOOD:				
Calcium, total (mg./100 cc.)		6.0		8.6
Phosphorus (mg./100 cc.)		8.6		8.1
Protein, total (gm./100 cc.)		7.1		6.5
Albumin/globulin (gm./100 cc.)			4.3/2.8	
Alkaline phosphatase (King-Armstrong units)			12.6	
Acid phosphatase (King-Armstrong units)			5.0	
Creatinine (mg./100 cc.)			0.7-0.8	
Blood urea nitrogen (mg./100 cc.)	8.2		9.3	
Carbon dioxide content (mM./L.)	18.3	17.4		
Sodium (mEq./L.)	142.3	133.1		
Chloride (mEq./L.)	97.0	94.9		
Potassium (mEq./L.)	4.32	3.4		
Magnesium (mg./100 cc.)			1.4	
Protein bound iodine (mcg./100 cc.)			7.0	
URINE:				
17-ketosteroids (mg./24 hours)			1.9	
17-hydroxycorticoids (mg./24 hours)			4.2	
Lead (mg./L.) (24 hrs.)	0.01			
Calcium (mg./24 hours)		108.0		
Phosphorus (mg./24 hours)		270.0		
Protein (gm./24 hours)		0.1		
SPINAL FLUID:				
Pressure (mm. water)	108 opening	Not measured		
Protein (mg./100 cc.)	24		31.6	
Cells (mononuclear)	3		4	
Colloidal gold	Negative			
Culture for bacteria and torula	Negative			
Sugar (mg./100 cc.)	79		60	
Chloride (mEq./L.)	116.2			
Calcium (mg./100 cc.)				4.8
Phosphorus (mg./100 cc.)				1.9

electroencephalogram one month after discharge was normal.

In November, 1959, at 3 years and 8 months, the patient was readmitted to the hospital because of status epilepticus, diarrhea for two weeks and abdominal pain for three days.

On admission the body temperature was 37.7° C., respirations 22 per minute, pulse rate 96 and blood pressure 98/64 mm. of mercury. The patient was unresponsive and hypotonia and hyporeflexia were noted. The pupils were dilated and reacted slowly to light. Severe blurring of optic disc margins was present. Seizures, characterized by stiffening of the entire body with elevation and extension of the right leg, were observed. Chvostek's sign was negative; Trousseau's sign was positive.

Results of blood, urine and spinal fluid examinations are listed in Table 1. The urine Sulkowitch reaction was zero. The parathyroid activity index ratio was 0.974 (normal 0.5 to 0.75) and the result of an Ellsworth-Howard parathormone test was positive. An electrocardiogram showed an increased QT interval. An electroencephalogram was severely abnormal, with high potential slow waves over the posterior hemispheres.

Therapy in the hospital included administration of dihydrotachysterol, calcium preparations, vitamin D and aluminum hydroxide. The seizures and tetany disappeared with resumption of normal gait one

week after therapy. Speech, which had been decidedly slurred, gradually improved. Psychological testing indicated a mental age of 2 3/12 years as compared with the chronological age of 3 9/12 years. On discharge from the hospital, the serum total calcium was 8.6 mg. per 100 cc. and phosphorus 8.1 mg. per 100 cc. Two months after discharge, an electroencephalogram was normal.

The patient was thereafter observed from time to time in the clinic and several adjustments were made in the prescription of drugs. The papilledema disappeared one month after the patient entered the hospital and there was no return of neurologic symptoms. One year after discharge from the hospital the serum total calcium was 9.7 mg. and the serum phosphorus 6 mg. per 100 cc. Psychological testing at the age of 4 4/12 years indicated a mental age of 2 11/12 years.

DISCUSSION

Thirteen cases of papilledema associated with idiopathic hypoparathyroidism and 22 cases following thyroidectomy have been reported in the literature. Seven of the thirteen patients with idiopathic hypoparathyroidism were children.

Neurologic complications of hypoparathyroidism include tetany, tetanic equivalents, convulsions, psychosis, mental retardation, basal ganglia calcifica-

tions, ataxia, tremor and choreiform movements, headache and sphincter disturbances. Electroencephalographic abnormalities have also been reported.

Steinberg and Waldron⁸ observed that tetany occurred in 78 per cent of the reported cases, tetanic equivalents in 10 per cent and convulsions in 52 per cent. Chvostek's or Trousseau's sign was evoked in all cases. The incidence of mental retardation in parathyroid insufficiency is about 7 per cent. Psychosis occurred in about 4 per cent of the reported cases and psychological changes usually were in the form of delusions, hallucinations, confusion and excitation or depression.

Pseudohypoparathyroidism may also be complicated by tetany, convulsions, mental retardation and calcium deposits in the basal ganglia. Six patients with pseudohypoparathyroidism and papilledema have been reported.

There is little doubt that "blurring of the discs" can occur in hypoparathyroidism without a space-occupying lesion in the cranium. Most investigators regard this as true papilledema due to increased intracranial pressure secondary to cerebral edema. There are, however, reported cases in which the spinal fluid pressure has not been elevated or cerebral edema present. Steinberg and Waldron found elevated spinal fluid pressure in only three of seven patients with papilledema. In the present case also there was normal spinal fluid and ventricular pressure without cerebral edema.

The pathogenesis of the edema that sometimes occurs still remains obscure. Most investigators have sought an explanation by considering the evidence that calcium deprivation had a hydrophilic effect on tissues and that acute tetany in animals and in the newborn was associated with an increase in water content of the brain.^{1,3,7}

Comparison of spinal fluid calcium with serum calcium shows that the spinal fluid calcium is within the normal range in hypoparathyroidism with papilledema although the total and ionic serum calcium is reduced. This observation has led to the belief that differences in concentration between ionic calcium on the two sides of the blood brain barrier might contribute to fluid accumulation in the brain.² However, in those cases in which both the spinal fluid and serum total calcium were simultaneously determined, differences in concentration between the two ranged from 0.7 to 2.5 mg. per 100 cc.^{2,4,5,6,9} The patient in the case here reported also had only a 0.8 mg. per 100 cc. difference between the spinal fluid and serum total calcium, although this was one week after treatment. As Grant⁵ pointed out, it appears unlikely that such small differences would be a sufficient cause for edema.

In view of the observation that increased spinal fluid pressure, cerebral edema and significant differences in concentration between calcium on the two sides of the blood brain barrier are not always present in papilledema, other factors should be investigated. Further attention should be directed toward such factors as: (1) Serum hydrogen ion concentration, (2) serum potassium levels, (3) the influence of parathyroid hormone, vitamin D and serum phosphorus, and (4) the equilibrium between blood calcium and spinal fluid calcium, since the spinal fluid calcium may no longer represent the diffusible portion of the serum calcium when the blood constituents are undergoing pronounced fluctuations.

SUMMARY

Idiopathic hypoparathyroidism is a good example of a metabolic disease which can first manifest its derangements in the form of neurologic signs and symptoms. The child presented in this report had been treated for almost two years as having idiopathic epilepsy, cerebral palsy, cerebellar degeneration and benign intracranial hypertension before the basic metabolic cause of his problem was determined. This case demonstrates that metabolic diseases may be overlooked in neurologic disturbances.

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EDITORIAL

Kerr-Mills or King-Anderson?

ONE OF THE bitterly disputed bills now before the Congress is the King-Anderson bill, a proposal to supply hospital and nursing home services to all beneficiaries of the Social Security System. It would be financed by adding another fractional percentage on the Social Security taxes of both employers and employees.

The medical profession is opposing this proposal, on grounds which seem more than adequate to thinking physicians but which have been brushed aside by the proponents of the Social Security approach to the provision of services for the elderly.

Out of the debate on this measure, several curiously interesting angles have developed, including extreme diversionary tactics by labor's representatives and dogged platform-hugging by the adherents to President Kennedy's legislative program. The members of Congress must, in all clarity and honesty, see the direction in which the King-Anderson bill would lead the country, namely, one step further down the road to a socialistic state. In loyalty to their leader, however, many members of Congress seem willing to follow blindly, in full faith and mindless of the major shift in Social Security philosophy which this measure would represent.

In the last Congress, the Kerr-Mills bill, also designed to provide hospital and nursing home services—plus medical services—to the needy aged was adopted and signed into law.

With such a law already on the books, the public is confused about what the fighting is all about. It would be surprising if such confusion did not exist. What the public has not yet grasped is the diametrical opposition of the two methods designed to accomplish essentially the same end. Where two such approaches are in evidence, the public is likely to follow the proposals made by the incumbent

President. It is he who ran on a platform which promised much. It is he who introduces the legislation to carry out the platform pledges. It is he whose office commands the time and space of news media. Finally, it is he who dictates what information is passed out to all news outlets, whether they be newspapers, magazines, radio or television.

To oversimplify these opposing measures, the King-Anderson bill would add Social Security taxes on both employers and employees and would utilize these funds to provide both hospital and nursing home services for those drawing Social Security benefits. The taxes would be compulsory; the use of the services would be optional for those who chose to provide their own needed services from their own resources.

Again oversimplifying, the Kerr-Mills bill provides federal moneys out of general taxation, these funds to be matched by state and local government and the total to be used, at the discretion of the states, to provide medical, hospital and nursing home services for those who are in need of them and cannot meet the cost with their own sources of funds.

The Kerr-Mills bill, already on federal statute books and, state by state, being implemented at the state and local level, retains home rule, state's rights and the objective evaluation of need before benefits are granted.

King-Anderson, on the other hand, would centralize all authority in the federal government and would disregard the matter of need.

While the president, his administration and his majority in Congress have full access to all news media and hence the opportunity to color their releases in favor of their own legislative proposal, they have omitted the one key fact about the King-Anderson bill which should be of utmost importance to every citizen and every taxpayer.

This fact is: the King-Anderson bill would establish the principle that the Social Security mechanism may provide services rather than cash benefits. With hospital and nursing home services as the entering wedge, what is to prevent this administration from next providing housing, groceries, clothing or any other essential of the elderly? Carried to the extreme, such a program could effectively transfer the entire load of the elderly from communities, counties and states to the federal government.

Some proponents of the King-Anderson program have admitted that "this is just the beginning." They hold that physicians' services are omitted from the initiation of such a program of services and that physicians therefore have no moral right to oppose the bill, as it does not directly concern them. This attitude overlooks the fact that a considerable number of physicians—radiologists, pathologists, and anesthesiologists, as well as all interns and residents—render professional services chiefly in hospitals. These services *are* in the purview of the bill, and hence are matters of direct concern. Moreover, one look at the progression of the whole Social Security program in its quarter-century of existence should convince any fair-minded person that here is a program which consistently expands its authority, its control over the lives and activities of its beneficiaries and its tax bite on employers and employees.

The same fair-minded person, who has the inalienable right to express opposition to any proposal before the Congress, knows that social legislation, once enacted, is just about impossible to reverse. A system of socialized government goes in one direction only, upward and upward.

Today we see a situation in which the medical profession is standing as the only really outspoken group in opposition to the further socialization of our entire system of government. There are allies, to be sure, but the medical profession is the one group which stands up to be counted—and to accept the brickbats thrown by proponents of further socialization.

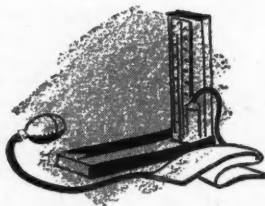
The most vocal of these proponents is organized labor. To labor, additional socialization is a fringe benefit which is good for the worker. Government control is assumed and labor is willing to make this assumption as a means to gain an end. Of course, when government wants to step in on a problem relating to labor practices, that is another matter.

In the King-Anderson debate, certain elements of labor have not only backed the administration's proposal but have set themselves up as the chief hecklers of the medical profession. Their role to date has been to forget the issue and to concentrate on calumny and discrediting of the medical profession. Public debates and Congressional appearances of some of labor's top brass have consistently shown that they do not wish to discuss the merits or faults of the King-Anderson bill but to use the opportunity to villify the very physicians who have helped create the problems of the elderly by providing health services which keep people alive and add to the inventory of the aged. This seems paradoxical to many but not to those who know that many elements of labor regularly and vigorously push for legislation which favors their own members, regardless of the effects of such legislation on others.

Present indications are that the King-Anderson bill will not pass, may not even come to a vote, in this session of the present Congress. Next year—that's another matter.

Meanwhile, physicians will do well to study the existing struggle, where the opponents line up on one side as those in favor of centralized and socialized governmental activity and on the other in favor of man as an individual, with responsibilities and prerogatives of his own.

If the bars should be dropped and the social planners be given encouragement to regulate our lives, our health services and our taxes, there are no limits in sight short of the ultimate socialistic state, such as our own government now opposes throughout the world. This is no time for equivocation. This is the time to stand on principles and to carry the fight against King-Anderson legislation until this kind of proposal is soundly defeated.



The President's Page



Health Security, American Style

SHOW ME A MAN who can't work or help himself and I will show you an unhappy man. Show me an ally who is given free money without responsibility and I will show you a turncoat. Happiness is not a destination . . . it is a journey; one of challenges met, obstacles overcome, victories gained. Therein lies the key to vitality, to new frontiers, to America and all it stands for . . . the dignity, value and happiness of individual effort and achievement . . . at any age.

And these truisms apply to government as it serves citizens. To the extent that government fosters opportunity, it provides a meaning to life; and to the degree that it permits rewards for individual effort, it creates contentment. The contrary patterns of rewards without achievement; support without effort, no matter how subtly given, ultimately destroy the mainspring of living.

True, in a civilized society the individual must have some security from catastrophe, and the older the person the more vulnerable some may be. But the rules for providing this security for health, housing and food must be such as not to violate the basic rules for contentment that apply for all people.

So it is with medicine's belief as regards methods for providing the security for the health needs of all citizens—even those made "aged" at 65 by legislative fiat. Government largesse (and for that matter why not include food, clothing, shelter?) could be distributed as a "right" of a citizen for not being dead . . . to be given to all, rich and poor, hungry or surfeited, robed or threadbare.

However, with the challenge of communism, medicine does not believe that America dares destroy, by wanton dispersals without need, the basic moral fiber that has made her great. Also, where need does exist, the resources to help it must not be dissipated by profligate and stultifying gratuities to those who have happily experienced the exhilarating challenge of successful, personally achieved security. Therein

lies the heart of the differences between the two philosophies for providing government health care to citizens.

The California Legislature, the Administration and your C.M.A. have been national leaders in implementing a logical, generous and responsible bill designed under the Kerr-Mills Law. It does meet the honest needs of the older citizens, it will stimulate and permit the entire health team to function at its best. Within its enlightened provisions, wherein "the poorhouse" and "bankruptcy" are no longer threats, an exciting new concept in government participation has been initiated, one that your medical society molded, nurtured and supported.

How frequently one hears doctors cry: "Isn't the medical profession ever *for* anything? Why doesn't Medicine have a plan, come forward with something new that doctors, their friends, rational citizens and responsible legislators can all get behind!" In an inflationary, dollar devaluating economy, some need does exist for those with modest resources, and a method for help must arrive before financial collapse!

Yes, your medical society—county, state and national—has worked hard, united and with public dedication, to develop a positive program to meet the need, to acknowledge wherein government should help, and to do so in a framework that will permit medicine and the health sciences to work at their best quality and dedication.

It was with much pride the California Medicine's leadership in the nation was presented before an attentive, respectful and very knowledgeable Ways and Means Committee. So do not, you yourself, cast aside this enlightened law for health security, American style, until you have seen it in action, read and discussed it, and can know personally its many virtues.

Hans B. B. M.D.

California MEDICAL ASSOCIATION

NOTICES & REPORTS

Council Meeting Minutes

Tentative Draft: Minutes of the 471st Meeting of the Council, Hilton Inn, San Francisco Airport, July 15, 1961.

The meeting was called to order by Chairman Sherman at 10 a.m. on Saturday, July 15, 1961, in the Hilton Inn, San Francisco International Airport.

Roll Call:

Present were President Bostick, President-Elect Wheeler, Speaker Doyle, Vice-Speaker Heron, Editor Wilbur, Secretary Hosmer and Councilors MacLaggan, Wilson, Todd, Quinn, O'Neill, Kirchner, O'Connor, Ham, Dalton, Murray, Davis, Miller, Sherman, Campbell, Morrison, Anderson and Teall. Absent for cause, Councilor Rogers. A quorum present and acting.

Present by invitation were Messrs. Thomas, Clancy, Whelan, Klutch, Tobitt, Edwards and Bowman, Mrs. Griffith and Doctor Batchelder of C.M.A. staff; Mr. Hassard of legal counsel; Eugene Salisbury and John Fraser of the Public Health League of California; county society executives Scheuber of Alameda-Contra Costa, Lingerfelt of Fresno, Geisert of Kern, Dalbec of Los Angeles, Grove of Monterey, Somerville of Napa, Dochterman of Sacramento, Donmyer of San Bernardino, Nute of San Diego, Nieck of San Francisco, Funk of Solano, Brown of Sonoma, and Rideout of Butte-Glenn; Messrs. Paolini, Webb, Heller, Nyren, Lyon, Wahlberg and Dr. T. Eric Reynolds of California Physicians' Service; Dr. H. C. Pulley of the State Department of Public Health; Mrs. Eunice Evans, deputy director of the State Department of Social Welfare, Dr. Stafford Warren, dean of the U.C.L.A. medical school; Dr. Gerald Shaw; and Mr. Richard Phillio of the American Medical Association.

1. Membership:

(a) A report of membership as of July 15, 1961, was presented and ordered filed.

(b) On motion duly made and seconded, 258 delinquent members who have been reported since the last previous meeting were voted reinstatement.

(c) On motion duly made and seconded in each instance, ten applicants were voted Associate Membership. These were: Benjamin Henry Barbour, Sterling William Morgan, Los Angeles County; John Carolan, Elizabeth M. Cuthbertson, Richard B. Paddock, Leonard N. Swanson, San Francisco County; James A. Peal, San Joaquin County; John Finocchiaro, Buren William Krahling, San Luis Obispo County; Gizella W. Shannon, Tulare County.

(d) On motion duly made and seconded in each instance, eight members were voted Retired Membership. These were: Horace A. Hall, Orange County; William M. Miller, Placer-Nevada County; Fred C. Miller, San Bernardino County; Mary C. Jaquette, Clarence E. Rees, San Diego County; Theodore L. Althausen, San Francisco County; Hubert O. Swartout, San Luis Obispo County; E. F. Roth, Santa Clara County.

(e) On motion duly made and seconded in each instance, 14 members were voted a reduction of dues because of illness or postgraduate study.

WARREN L. BOSTICK, M.D.	President
OMER W. WHEELER, M.D.	President-Elect
JAMES C. DOYLE, M.D.	Speaker
IVAN C. HERON, M.D.	Vice-Speaker
SAMUEL R. SHERMAN, M.D. . . .	Chairman of the Council
RALPH C. TEALL, M.D.	Vice-Chairman of the Council
MATTHEW N. HOSMER, M.D.	Secretary
DWIGHT L. WILBUR, M.D.	Editor
HOWARD HASSARD	Executive Director
JOHN HUNTON	Executive Secretary

General Office, 693 Sutter Street, San Francisco 2 • PRospect 6-9400
ED CLANCY Director of Public Relations

Southern California Office:
2975 Wilshire Boulevard, Los Angeles 5 • DUnkirk 5-2341

2. Approval of Minutes:

On motion duly made and seconded, the minutes of the 468th Council meeting held April 28 to May 3, 1961, the 469th Council meeting held May 3, 1961, and the 470th Council meeting held May 27, 1961, were approved.

3. Reports of Affiliated Organizations and Invited Guests:

(a) Dr. Stafford Warren, dean of U.C.L.A. Medical School, reviewed for the Council the various activities of the Educational Advisory Committee concerning an application by a Los Angeles medical college for approval as an accredited medical school.

(b) *Department of Public Health*—Dr. Pulley informed the Council about the legislative changes recently enacted relating to the monitoring of radiation by the State Department of Public Health. Certain responsibilities previously assumed by the Atomic Energy Commission have been transferred to the Department of Public Health. The legislature enacted a law requiring polio immunization of all minors and adults who enroll in any school. The Department is studying ways in which this law may be implemented and a report will be made to the Council later.

(c) *Department of Social Welfare*—Mrs. Eunice Evans, deputy director of the State Department of Social Welfare, reported that 68 different bills were passed by the legislature which relate to the work of the Department of Social Welfare. Many of these bills concern medical care. S.B. 325 provides chronic care for the needy aged not on public assistance. The Department will ask the help of the C.M.A. and others in drafting necessary standards to properly administer this bill.

Mrs. Evans reported that the legislature relaxed the relative responsibility law and liberalized the definition of disability. Mrs. Evans also reported the Department's concern about advertising ancillary services that are taking advantage of the welfare program and ways to control certain abuses of the medical care component of the public assistance program. The Department contemplates calling together a statewide committee to study and make recommendations about this latter program.

(d) *California Physicians' Service*—Dr. T. Eric Reynolds, president of C.P.S., reported that progress is being made in upgrading C.P.S. membership to better programs. The number of participating physicians has increased, as has the volume of claims.

Dr. Reynolds told the Council that C.P.S. in conjunction with the State Department of Public Health, the Farm Bureau, C.M.A. Committee on State Medical Services, and other interested groups, is studying a proposal for a prepaid medical care program

for seasonal farm workers and their families. He advised that the ultimate solution of this problem will probably call for new approaches.

(e) *C.M.A. Delegates to the A.M.A. House of Delegates*—Dr. Dwight L. Wilbur, chairman of the C.M.A. delegation to the A.M.A. House of Delegates, reviewed the recent meeting of the A.M.A. House of Delegates. He called attention particularly to the helpful action of A.M.A. which relates directly to our contract with the California Osteopathic Association. He commended the effective work of the members of the delegation.

4. Reports of Officers:

(a) President Bostick also commented on the effective work of the C.M.A. delegation to the A.M.A. House of Delegates, and the fact that it was most democratically led by Dr. Wilbur. He advised the Council that Dr. Wilbur was elected to membership on the A.M.A. Council on Medical Education and Hospitals.

Dr. Bostick reported that the Emergency Action Committee recommended that *Newsletter* be expanded to the extent of carrying an additional page to report in greater detail concerning the actions of the C.M.A. Council and their discussions relative to problems confronting medicine. It was moved, seconded and approved that a Council page be added to the C.M.A. *Newsletter*.

Dr. Bostick informed the Council that he had requested an opportunity to testify before the Ways and Means Committee of the House of Representatives on the King-Anderson Bill, H.R. 4222.

(b) Report of President-Elect Wheeler advised the Council of the efforts that are being made by him in cooperation with the State Department of Public Health and county medical societies concerning medical care for seasonal agricultural workers and their families.

5. Report of Council Committees:

(a) *Committee on Committees*—Dr. Wheeler presented a list of recommendations for changes in commission and committee members, creation of new committees and actions to existing committees. On motion duly made and seconded, this list as appended to these minutes was approved.

(b) *Finance*—Chairman Teall of the Finance Committee presented a tentative annual report for the fiscal year 1960-1961, ending June 30, 1961. The report of the committee was approved and the committee and its chairman commended.

Dr. Teall called to the attention of the Council a revised format for the financial report. The committee is seeking ways to make the financial report clearly reflect to the Finance Committee and the Council the things they need to know.

(c) *Speakers' Bureau*—Doctors Anderson and Teall reported that a tremendous amount of material has been gathered, coordinated and organized for the use of the Speakers' Bureau. The immediate need is for county society Speakers' Bureau programs to be organized in order to supplement the C.M.A. program. Dr. Anderson requested the members of the Council to stimulate their county societies to request that representatives of the Speakers' Bureau meet with the Executive Committee of each county medical society. Dr. Anderson made a like request of the executive secretaries of the county medical societies.

(d) *Bureau of Research and Planning*—Doctor Franklin Ham reported that the Bureau of Research and Planning has four principal studies which they are presently following:

1. A study of the composition of the membership of C.M.A.

2. A more accurate scale by which to judge medical care costs than the present Consumer Price Index relating to medical care costs.

3. Obtaining background material in order to develop recommendations concerning ways to judge and control the quality of medical care.

4. The development of a comprehensive prepaid medical care plan.

(e) *Francis E. West, M.D.*—Dr. James MacLaggan reported that Dr. Francis E. West was to be awarded the Papal decoration of Knight of St. Gregory on July 16. The Council directed the Secretary to forward a telegram to Dr. West, extending to him the congratulations and felicitations of the officers and Council members on the occasion of his being awarded a Papal decoration as Knight of St. Gregory.

6. Reports of Commissions:

(a) *Commission on Medical Services*—Dr. Harrington submitted a report of the Liaison Committee to Medicare and VA Hometown Care Programs in which a Letter of Agreement with the VA was recommended. After discussion, it was voted to reject the Committee report and to inform the VA that the proper agency in California for it to take up the subject matter of the proposed Letter of Agreement with, is California Physicians' Service.

(b) *Commission on Community Health Services:*

1. Dr. MacLaggan read to the Council a proposed letter to the Division of Industrial Safety of the State of California, concerning the establishment of standards relating to industrial noise hazards which had been recommended by the Committee on Occupational Health. On motion duly made and seconded, the Council approved this letter.

2. This committee also recommended that the Council urge California Medical schools to place more emphasis on the medical problems incident to industrial hazards. It was moved, seconded and approved that this recommendation be referred to the Commission on Medical Education.

3. This commission also recommended that the name of the Committee on Rural and Community Health be changed to the Committee on Rural Health. Matters relating to community health will be considered by the commission itself. This recommendation was moved, seconded and approved with instructions that appropriate By-Law change proposals be prepared for submission to the next meeting of the House of Delegates.

4. It was moved, seconded and approved that House of Delegates resolutions 23 and 35 dealing with fluoridation and air pollution be re-referred to the Commission on Public Agencies.

It was recommended that the proposal re determining the range of hourly pay rate afforded to part-time physicians in industry, should be referred to the Committee on Fees. On motion duly made and seconded, this recommendation was approved.

(c) *Commission on Public Policy:*

Committee on Legislation—Mr. Salisbury reported to the Council that they had each received a copy of Doctor Kilroy's written report concerning the legislative changes which had been enacted. The legislative matters referred to Interim Committee study which are of particular interest were noted as follows:

1. A proposal concerning professional corporations.

2. The proposed change in the commitment of the mentally ill.

3. The proposal for employment of physicians by district hospitals.

4. Various approaches concerning government control over voluntary health insurance.

5. The proposed consolidation of the Departments of Public Health, Mental Hygiene and Social Welfare.

Mr. Hassard suggested that a C.M.A. committee be designated to follow particularly the activities of the Interim Committee studying the proposed professional corporation. On motion duly made and seconded, the Commission on Professional Welfare was directed to follow this matter.

It was moved, seconded and approved that a letter of commendation be sent to Dr. Kilroy, Mr. Hassard, Ben Read, Gene Salisbury, John Fraser and Robert Huber, for the very effective legislative liaison work they performed during the recent session of the California State Legislature.

Committee on Public Relations—Dr. Todd reported that the Public Relations Committee chairman has proposed that a series of regional PR conferences be held. After discussion, it was moved, seconded and approved that this proposal be referred to the chairman of the Public Relations Committee and the ad hoc Committee for Annual Conference of County Society Officers with directions that the committee consider the advisability and feasibility of attaining the objectives sought by utilizing other scheduled meetings.

Mr. Clancy reported to the Council that the annual visits of the President and President-Elect to the various county societies are being arranged and planned.

Mr. Clancy also called to the attention of the Council the recent A.M.A. report concerning better disciplining of the profession by itself. He showed copies of recent newspaper reports regarding fraud and abuse of public medical care programs by physicians and others.

Mr. Tobitt reported to the Council the various activities concerning the TV series "Doctors at Work."

(d) **Commission on Public Agencies**—The written report of the Committee on Veterans' Affairs was received and approved. It concerned the veterans' home at Yountville, California.

7. **Unscheduled Items—New Business:**

(a) **A.M.A. Report "Tis Neither Black Nor White"**—There was extensive discussion of the problem relating to the medical profession policing and controlling abuses of the privilege of its members to practice medicine. It was moved, seconded and approved that the Committee on Committees consider this matter and either select an existing committee or recommend the appointment of a special committee to study and make a report to the Council concerning what might be done.

(b) **Time and Place of Next Council Meetings**—It was moved, seconded and approved that the Council should meet on August 19 and September 23 in Los Angeles, at a place to be designated later.

8. **Report of Staff and Legal Counsel:**

Mr. Hassard advised the Council that the Industrial Accident Commission has held two public hearings on the C.M.A. Petition for a revision in the Official Minimum Medical Fee Schedule. No word has yet been received concerning the action that may be taken by the Commission and it is anticipated that some time may elapse before a final decision is announced. The Council was advised that the Articles of Incorporation have been submitted to the California Secretary of State to establish a non-profit research and educational foundation.

Adjournment:

There being no further business to come before it, the meeting was adjourned on Saturday, July 15, 1961, at 4:45 p.m.

SAMUEL R. SHERMAN, M.D., *Chairman*
MATTHEW N. HOSMER, M.D., *Secretary*

RECOMMENDATIONS OF THE COMMITTEE ON COMMITTEES TO THE COUNCIL

July 15, 1961

1. **Committee on Mental Health:**

William L. Cover, San Bernardino, resigned.

The Committee on Committees recommends the appointment of Francis G. Mackey, Fullerton, to fill the unexpired term ending 1964.

2. **Committee on Public Relations:**

Purvis L. Martin, San Diego, resigned.

The Committee on Committees recommends the appointment of Robert T. Plumb, San Diego, to fill the unexpired term ending 1962.

3. **Liaison Committee to the California Hospital Association:**

The Council has authorized the expansion of this Committee so it can accelerate its inspection program.

The Committee on Committees recommends the appointment, for one-year terms, of the following:

William A. Newsom, San Francisco
James W. Martin, Sacramento
Edwin G. Clauson, Oakland
Wilfred J. Snodgrass, Santa Monica
Daniel W. Black, Hayward
John R. Heckman, Marysville
Reginald H. Smart, Los Angeles
Lucius L. Button, Santa Rosa
John T. Saidy, San Mateo
William L. Argo, Fresno
John C. Lungren, Long Beach

This group of physicians, with the existing three-man committee, will form three inspection teams of four men each.

4. **Advertising Committee:**

The Committee on Committees believes it would be prudent to maintain closer Council liaison with this committee and recommends that the secretary of the Association, Dr. Hosmer, be appointed an ex-officio member of this committee.

5. **Committee on Private Practice of Medicine by Medical School Faculty Members:**

Werner F. Hoyt, Mt. Shasta, resigned.

The Committee on Committees recommends that Herbert Moffitt, Jr., of San Francisco be appointed as chairman.

6. Committee on Adoptions:

The Committee on Committees recommends that Dr. Walter H. Beckh of San Francisco be added to this committee.

7. Ad Hoc Committee on Organization and Procedures:

The Committee on Committees recommends the appointment of the following:

Wilbur Bailey, Los Angeles
August J. Haschka, Jr., Pacific Palisades
Matthew N. Hosmer, San Francisco
Donald A. Charnock, Los Angeles
Francis E. West, San Diego
H. Milton Van Dyke, Long Beach
Roberta Fenlon, San Francisco

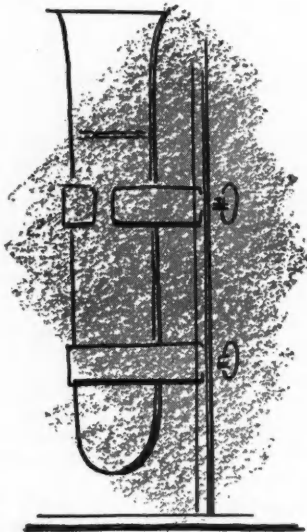
Donald D. Lum, Alameda
Charles E. Grayson, Sacramento
Walter H. Brignoli, St. Helena
Edward Liston, Palo Alto.

The Committee for Emergency Action and the Vice-Speaker of the House of Delegates shall be ex-officio members of this committee.

8. Annual Conference of County Society Officers Committee:

The Committee on Committees recommended the following:

John F. Murray
Albert G. Miller
Carl E. Anderson
John Morrison
Malcolm Todd (chairman).



In Memoriam

BANNING, SAM HUMPHREY. Died in Pleasant Hill, August 6, 1961, aged 48. Graduate of the University of Oregon Medical School, Portland, 1944. Licensed in California in 1951. Doctor Banning was a member of the Alameda-Contra Costa Medical Association.

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BARNES, PAUL DEWITT. Died in San Francisco, July 13, 1961, aged 74. Graduate of the University of Nebraska College of Medicine, 1913. Licensed in California in 1913. Doctor Barnes was a member of the Placer-Sierra-Nevada County Medical Society.

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BRYANT, HARRY E. Died July 26, 1961, aged 77, of cerebral thrombosis. Graduate of Rush Medical College, Chicago, Illinois, 1909. Licensed in California in 1924. Doctor Bryant was a member of the Los Angeles County Medical Association.

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CARY, JAMES ALISON. Died in an airplane crash near San Jose, July 23, 1961, aged 61. Graduate of Stanford University School of Medicine, Palo Alto and San Francisco, 1935. Licensed in California in 1935. Doctor Cary was a member of the Santa Clara County Medical Society.

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FAIRBROTHER, WILLIAM CARTER. Died July 28, 1961, aged 59. Graduate of Rush Medical College, Chicago, Illinois, 1929. Licensed in California in 1946. Doctor Fairbrother was a member of the Los Angeles County Medical Association.

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FAULKNER, EDWARD CORNELIUS. Died in Red Bluff, March 18, 1961, aged 63, of carcinoma of the bladder. Graduate of Creighton University School of Medicine, Omaha, Nebraska, 1929. Licensed in California in 1929. Doctor Faulkner was a retired member of the San Joaquin County Medical Society and the California Medical Association, and an associate member of the American Medical Association.

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HALL, ERNEST M. Died in Arcadia, July 9, 1961, aged 76, of heart disease. Graduate of Stanford University School of Medicine, Palo Alto and San Francisco, 1925. Licensed in California in 1925. Doctor Hall was a member of the Los Angeles County Medical Association.

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HEBEL, HERBERT DALE. Died in Long Beach, July 24, 1961, aged 49, of posthepatic cirrhosis. Graduate of the State University of Iowa College of Medicine, Iowa City, 1939. Licensed in California in 1949. Doctor Hebel was a member of the Los Angeles County Medical Association.

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KATZ, MILTON A. Died in Los Angeles, July 27, 1961, aged 48. Graduate of the University of Maryland School of Medicine and College of Physicians and Surgeons, Baltimore, 1938. Licensed in California in 1945. Doctor Katz was a member of the Los Angeles County Medical Association.

MENKES, KARL. Died in Los Angeles, July 13, 1961, aged 66, of coronary occlusion. Graduate of Medizinische Fakultät der Universität, Wien, Austria, 1922. Licensed in California in 1942. Doctor Menkes was a member of the Los Angeles County Medical Association.

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MILLER, WALLACE JENKS. Died May 31, 1961, aged 61, of multiple sclerosis. Graduate of Harvard Medical School, Boston, Massachusetts, 1926. Licensed in California in 1927. Doctor Miller was a member of the Los Angeles County Medical Association.

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MYERS, ORRIS REID. Died in Apple Valley, July 18, 1961, aged 69. Graduate of Creighton University School of Medicine, Omaha, Nebraska, 1917. Licensed in California in 1919. Doctor Myers was a member of the San Bernardino County Medical Society.

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NICHOLS, JACK. Died in Inglewood, July 11, 1961, aged 59, of coronary thrombosis. Graduate of the Medical College of Virginia, Richmond, 1938. Licensed in California in 1941. Doctor Nichols was a member of the Los Angeles County Medical Association.

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RASOR, CLAIRE. Died in Oakland, July 24, 1961, aged 78, of postero-septal myocardial infarction. Graduate of Northwestern University Medical School, Chicago, Illinois, 1908. Licensed in California in 1910. Doctor Rasor was a member of the Alameda-Contra Costa Medical Association.

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REVESZ, PAUL. Died in Alhambra, July 8, 1961, aged 57, of bronchial pneumonia. Graduate of Magyar Kiralyi Erzsébet Tudományegyetem Orvostudományi, Pecs, Hungary, 1935. Licensed in California in 1952. Doctor Revesz was a member of the Los Angeles County Medical Association.

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STODDARD, JAMES McCANN. Died in Santa Barbara, June 28, 1961, aged 83. Graduate of Medical College of Indiana, Indianapolis, 1902. Licensed in California in 1921. Doctor Stoddard was a member of the Los Angeles County Medical Association, a life member of the California Medical Association, and a member of the American Medical Association.

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THOMPSON, VERNON P. Died in Los Angeles, July 22, 1961, aged 62, of uremia and lymphosarcoma. Graduate of Harvard Medical School, Boston, Massachusetts, 1923. Licensed in California in 1923. Doctor Thompson was a member of the Los Angeles County Medical Association.

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VISALLI, JOSEPH. Died January 17, 1961, aged 74. Graduate of Hahnemann Medical College of the Pacific, San Francisco, 1911. Licensed in California in 1911. Doctor Visalli was a member of the San Francisco Medical Society.

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WOLFMAN, BENJAMIN H. Died in San Francisco, July 13, 1961, aged 49. Graduate of New York University College of Medicine, New York, 1936. Licensed in California in 1946. Doctor Wolfman was a member of the San Francisco Medical Society.

PUBLIC HEALTH REPORT

MALCOLM H. MERRILL, M.D., M.P.H.
Director, State Department of Public Health

THE GRANTING OF A LICENSE to manufacture Dr. Albert Sabin's oral poliomyelitis vaccine, Type 1, was announced August 17 by Dr. Luther L. Terry, Surgeon General of the U. S. Public Health Service.

While the California State Department of Public Health welcomes the licensing of this additional weapon against paralytic poliomyelitis, until all three types of poliomyelitis virus are included in an oral vaccine, the department can recognize the newly licensed vaccine only as a supplement to the Salk vaccine.

It cannot be regarded as a substitute for the Salk vaccine, which provides protection against all three types of paralytic poliomyelitis. In the nation as a whole, about 50 per cent of cases of paralytic poliomyelitis are Type 1, the remainder Type 3.

Nor does the department consider the single type Sabin oral vaccine as meeting the requirements of the compulsory school vaccination law (Assembly Bill 1940).

The State Health Department considers the oral vaccine as safe and effective, and as providing additional protection against Type 1 poliomyelitis—even for persons who already have had the full series of Salk inoculations. The most important value of this new vaccine will be in communities where there is an epidemic threat of Type 1.

This department and the members of its ad hoc Committee on the Prophylaxis of Poliomyelitis join Dr. Terry in his public statement that "it is of the highest importance that vaccinations continue with the Salk vaccine, which is the only weapon we have today to provide protection against all three types of polio."

The California Conference of Local Health Officers has recommended that California's premarital examination law be broadened to include a complete physical examination and premarital advice, in addition to the currently required blood test.

The recommendations were made following the results of a study by this department of the value of the premarital examination law in California.

The study disclosed:

1. Since 1940 some 3,700,000 persons have taken premarital examinations in California. Of these, 56,000 had reactive serologic tests for syphilis—a reactor rate of 1.55 per cent.

During 1959, 204,600 persons took premarital examinations. Of these, 2,047 had reactive blood tests. Twenty per cent of the persons with reactive blood tests were found on completion of diagnostic studies to be infected and not previously treated. In other words, of all who took the examination, one in 501 had previously unknown cases of syphilis that required treatment.

From the administrative point of view, no one has defined the cut-off point in terms of syphilis case-finding at which premarital examinations might no longer be considered worth while. An arbitrary decision might be made that for every 1,000 persons tested the activities are no longer worth the effort if only one person is found in need of treatment. Using this criterion, the law would have been discarded in 1954, when only one previously unknown case was found for every 1,266 persons taking the test.

However, since that time of low ebb, the ratio of cases found to persons tested has steadily increased to the 1959 figure of 1 to 501.

As part of the evaluation study, 563 persons were interviewed at the time they were applying for a marriage license and just after they had taken the premarital examination. The purpose of the interview was to determine the personal opinion and feeling of persons subjected to the examination.

Interview results were: Ninety per cent of the men and 80 per cent of the women indicated they had adequate knowledge of the purpose of the examination law; 98 per cent felt that this law is worthwhile; 11 per cent volunteered statements to the effect they felt the law should be strengthened and broadened to include a complete physical examination; 17 per cent stated they had asked questions of their physicians concerning health or marriage (of a premarital counseling type); and 15 per cent of the men and 20 per cent of the women stated they had questions concerning family planning that they would have liked to have asked at the time of their examination, but did not do so.

An assessment of states other than California revealed that no studies of premarital examination laws in any depth have been performed beyond reporting the mean serologic reactivity rates. When comparing data between states, California is about in the middle, compared to the reactivity rates of all states.



WOMAN'S AUXILIARY

TO THE CALIFORNIA MEDICAL ASSOCIATION

The Physician's Wife and Legislation

WE, THE MEMBERS of the Auxiliary, are organized solely for the purpose of helping foster any and all programs of the medical association on national, state, and local levels. Its aims and problems are ours. We stand to gain or lose in direct proportion with it, in all it strives to accomplish. Today, as never before, medicine is fighting to maintain its very existence as a free and unfettered profession. It is in this field—legislation—that the Auxiliary can have the greatest impact.

In years past, a physician's wife was not to have or express opinions on such grave matters. She was pictured as a mother, church leader and civic volunteer for any or all minor local programs. She agreed with everyone and was never involved in any controversial issues. Her role in such areas was that of public relations agent for her husband, as an individual. The clubs she joined and the entertaining she did was all done with one goal in mind, trying to lighten the load one physician was carrying. The complex situations were left for her husband to decide. Professional problems were not within her scope. And lastly, she never became involved in any political problems.

Today, the picture is greatly changed. The physician's wife is now a vital part of everything involving medicine in a legislative way. She still must carry on the aforementioned duties, but added to them is the part she must play in helping educate the public about the pitfalls of socialism. The latter has come about at the request of the medical association itself.

A physician's wife, being in most cases an active community leader, has golden opportunities every day to influence many groups of people. A well informed Auxiliary member could do more with a few well chosen words at a bridge table than all the speeches and campaigns combined.

This brings us to the most important aspect of legislation. To be of assistance to medicine, we must be well and correctly informed. Both the American Medical Association and California Medical Association have realized the necessity of a well educated Auxiliary. We have been included in meetings of their legislative committees and shown at first hand why certain policies are pursued. All our requests have been fulfilled and all questions answered. Never have any of their officers or representatives been too busy to respond when we call on them. If we are not well versed in legisla-

tion, we have ourselves to blame. They have given us the tools with which to work; it is up to us to use them.

The individual Auxiliary member may ask, and rightly so, what she—one person—can do to forestall bad legislation that bears on the whole nation. It is each one of us, individually, that is most important. Since our government is based on rule by representation, we have a big part to play at home. Your elected representatives have their ears tuned to the needs of their constituents. These needs must be made known. You, personally, can help sway a vote in Congress or the Assembly by letters. Urge all your friends and acquaintances to write to their government representatives. If they know the basic issues involved, they will be happy to help you. Refute statements by anyone who says, "You are wasting your time writing." Men in the medical profession, testifying before congressional committees have been bolstered by letters from citizens backing their point of view.

Knowing who represents you and how he or she represents you is also important. Make a friend of your elected official. Start a get acquainted program of your own. It is much easier to communicate with a friend than a stranger. Let your representatives know you are aware of what they are doing, on what committees they serve, and how they vote. They will welcome your interest. Question them on reasons for specific stands they have taken on particular bills. If they do not agree with you, be pleasant and try in a courteous way to show them why you disagree. Communicate with them between elections. Too often we do all our legislating at election time, when it may be too late.

Physicians' wives can be an asset to their busy husbands beyond the role of hostess. Keeping abreast of the new techniques and medicines is an almost insurmountable task, and consumes the larger part of a physician's "leisure" time, and since his first responsibility is to his patients, what happens politically is a secondary concern. If the physician's wife is well informed, she can keep her husband up to date on what is happening in Washington and Sacramento. Legislation is intriguing, and the most complacent become vigorous champions of sound government if they are exposed to basic facts.

The legislative committee of the Auxiliary functions only on the recommendation and approval of the medical association. We are ready and willing to assist at all times.

MRS. ROBERT J. DOUDS
State Legislative Chairman
Woman's Auxiliary to C.M.A.

INFORMATION

Data on Aging

Federal payment for hospitalization and partial medical care of certain citizens 65 and over is proposed in H.R. 4222. There are several important aspects of this proposed legislation which merit consideration, notably (1) How great is the actual need? and (2) Who would actually be covered by the proposed measure?

1. The need for subsidized hospitalization and medical care is believed to be distinctly limited. A national study of the total life situation of those 65 and over (by Wiggins and Schoeck) showed that 90 per cent of the respondents reported no unmet medical needs of which they were aware. About 96 per cent reported no medical debts. This would leave presumably 4 per cent with such debts.

2. The proposed legislation would cover those eligible for benefits under the Social Security Act and the Railroad Retirement Act, but not other elderly persons.

The Wiggins-Schoeck Report has been bitterly assailed by supporters of H.R. 4222 as being nonrepresentative and incomplete. Its authors (in a recent letter to *Science*) point out that it is indeed representative of the older population currently designated in H.R. 4222, and that it intentionally omitted those segments which would not be covered by H.R. 4222. In other words the data on needs of elderly persons as uncovered by Wiggins and Schoeck is pertinent to the legislation at hand. For this reason it is believed that physicians will be interested in reading the reply of these authors to the criticisms of their survey.

With the permission of *Science* and of the authors, it is reprinted herewith.

In the section "Science in the news" *Science* carried an unsigned story [132, 604 (2 Sept. 1960)] regarding research done by us. On 19 October 1960 an employee of *Science* signed a receipt for a registered letter which we submitted for publication in reply to this story. You recently informed us, with an apology which we are happy to accept, that our letter was misplaced before it could be printed. Since we do not care to enter the name-calling arena, which is political rather than scientific, we wish, again, to comment about our study and its data.

"A Profile of the Aging: U.S.A." is the first national study of the total life situation of the population 65 years of age and older. Previous national studies have focused on economic status (Steiner and Dorfman), on health and economic status (Shanas et al.), or on medical expenditures and medical costs (Odin W. Anderson et al.; U. S. Social Security Administration publications). The U. S. Bureau of the Census regularly collects limited data about the total population, which include the

"older" category. By contrast, our interviewers asked more questions about religion and religious participation than about health and the economics of health.

We excluded certain groups, chief of which were the recipients of old age assistance grants. Here we followed the precedent of the Social Security Administration, whose 1956 study excluded recipients of old age assistance unless they also received social security payments. It has been estimated that the often-quoted Social Security study excluded 55 per cent or more of persons 65 and over. Other studies have typically excluded certain categories of the universe to be sampled, and a recently reported national study excluded "individuals in certain occupational groups and those living in institutions."

We are pleased to report that it has been unnecessary to weight any of our data to produce an artificial "representativeness" in our sample. The readers of *Science* will doubtless know that weighting of strata in sample data is a common procedure when the actual sample is found not to be representative of the population sampled. The findings of the U. S. Bureau of the Census are commonly "weighted," particularly in the "Current Population Reports," but also in the "Decennial Censuses of Population." Steiner and Dorfman reported that their data were weighted to compensate for underrepresentation of certain characteristics of the population. A recent report of a joint study by the Health Information Foundation and the National Opinion Research Center (NORC) included weighted as well as unweighted data. We do not wish to be understood as criticizing these weighting procedures. Rather, we invite attention to their being commonplace, and to the high representativeness of our own sample, which made weighting unnecessary.

Characteristics of our sample are compared to independent estimates of the United States population 65 years of age and over in Table 1. It should be noted that the sample was not stratified for these characteristics, and that the data shown for the "Profile" study are purely random.

The readers of *Science* will be familiar with a number of procedures for analyzing the "fit" of the two sets of characteristics.

Considerable attention has been given to our findings, with the statement or inference that they are inaccurate. As a matter of information only, it can be reported that the findings of the Steiner-Dorfman study were called "controversial." Ethel Shanas's National Opinion Research Center study also created considerable discussion. Her report of income for the aged was higher than U. S. census estimates, and she reported that 60 per cent of the aged are either as well off economically after the age 65 as before, or are better off after 65. In spite

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of the generally recognized fact that census figures for income are some 20 per cent too low, Shanas's findings were attacked again in the "Background Paper on Income Maintenance," prepared for the 1961 White House Conference on the Aging. (It seems fairly obvious that the Social Security study would tend to substantially understate income, since the recipients of Social Security retirement grants are removed from the rolls if their income from employment rises too high.)

From the latest data available, it is illuminating to examine the income of the aged. The "Chart Book" for the White House Conference on Aging states that federal programs provided \$17 billion in benefits and services to the aged population. The "Background Paper on Income Maintenance" reported that the federal programs provided between one-third and two-fifths of the total income to the aged. Assuming the lesser total income, we reach a gross income for 17 million aged of \$42.5 billion. Simple arithmetic reduces this to an average per capita income of \$2,500. The median aged respondent in the "Profile" study reported income between \$2,000 and \$3,000.

Our findings in the field of health produced some comment. We found that 90 per cent of our respondents had no unmet medical needs that they knew of. It has been suggested that all kinds of people know more about an older person's health than he does. In any case, a considerable number of studies by state or region, and most national studies, have assumed that the respondent has a fair idea whether he is sick or not.

Ninety-six per cent of our respondents reported no medical debts, and exactly the same percentage was found by Steiner and Dorfman for 1951.

The most recent study of medical expenses of the aging known to us is based on data collected through the National Opinion Research Center. Odin W. Anderson, Patricia Collette, and Jacob J. Feldman, in "Family Expenditures for Personal Health Services" (Health Information Foundation, 1961), present findings comparable to our own. The "Profile" study showed that 97 per cent of respondents had expenditures for physicians below \$50 for one month, and that 2 per cent had expenses above \$50 but below \$100. Anderson et al. found that 86 per cent of their aged respondents had expenditures for physicians below \$100 for an entire year. The "Profile" study showed that 95 per cent of the respondents had no hospital expenditures in one month and that 3 per cent had hospital expenditures below \$100. Anderson reports that 86 per cent of his aged respondents had no hospital expenditures in a year, and that 5 per cent had hospital expenditures below \$100. According to the "Profile" study, 98 per cent of the aged had expen-

TABLE 1.—Random Characteristics of the "Profile" Study Sample Compared with Data from Other Sources

Category	"Profile" Study		U. S. Census*	NORC†
	Per Cent		Per Cent	Per Cent
Age distribution:				
65 to 69.....	34.5		37.5	
70 to 74.....	26.5		28.0	
75 to 79.....	22.3		19.3	
80 to 84.....	11.5		9.8	
85 and over.....	4.3		5.3	
Marital status:				
Married	54.0		51.9	
Divorced	3.0		1.5	
Widowed	35.4		38.1	
Single	6.4		7.2	
Separated	0.4		1.3	
Not married	46.0		48.2	
Religious preference:				
Protestant	74.5		67.9	
Catholic	19.0		22.2	
Jewish	4.7		3.7	
Other	1.7		1.3	
Sources of income:				
Employment	31.4		30.4	
Old age and survivors insurance	58.8		57.3‡	
Rent	20.0		17.8	
Non-cash assistance	32.1		30.8	

* Age distribution data for 1957; marital status data for March 1959 [Current Population Repts. Ser. P-20, No. 96 (1959)]; religious preference data for 1957 [Current Population Repts. Ser. P-20, No. 79 (1958)].

† Data for 1956.

‡ Includes related programs.

ditures for medicines of less than \$50 in a month, while Anderson reported that 88 per cent had spent less than \$100 for (prescribed) medicines in a full year.

If a few of our regional associates in the study, in response to a request from a subcommittee of the United States Senate, have felt it their duty to support the subcommittee, we may expect the data to be biased in favor of universal misery. If, in spite of the data they delivered and certified to us, some associates wish to believe that the aging are in a grave plight, it is a tribute to their professional competence and scholarly objectivity that they furnished the data as obtained by the interviewers. It has often been said that a chief mark of the scientist is that he even reports findings he does not like.

JAMES W. WIGGINS
HELMUT SCHOECK

Emory University, Atlanta, Georgia

Our reporter did try to contact Wiggins and Schoeck before publishing the news article. He telephoned Atlanta, but was unable to reach them. His report was based not on the press releases of the Senate subcommittee but on an examination of the letters in the files of the subcommittee; interviews with American Medical Association officials in Washington; the report, under the by-line of Wiggins and Schoeck in the *Wall Street Journal* summarizing the findings of their study; and the A.M.A. press release interpreting their work.—Ed. [Science]

Letters to the Editor...

Resolution on C.P.S.

IN THE INTERESTS of verity may I draw your attention to a small but important typographical erratum in your July 1961 issue—an erratum calling doubly for correction because of your apparent initiation of a new policy, that of not printing those resolutions which failed of adoption by the House of Delegates.

As you well know, causes novel or original are frequently unpopular when first proposed but, if meritorious, can eventually be adopted—to the ultimate benefit of all concerned. For this reason they do not deserve burial or censorship—if space permits. And a glance at the space devoted to the empty two gloves on page 31 suggests such does exist.

The erratum is the insertion of the prefix “DIS” before the word “SOLUTION” on page 58. In justice to a past Secretary of the Association, one who attended many C.P.S. Trustees meetings, and one deeply interested in the maintenance of sound private medical practice of good quality, I believe you should publish a corrected title and print the resolution in full. Then by all means add the fact that this year it was not adopted.

Our President writes of the “tyranny of bureaucratic . . . administrative decision” and the need for survival of the “personal competent physician.” He links C.P.S. and C.M.A. in this twin appeal. May I likewise ask freedom from what might be construed as bureaucratic infringement, and in the very interest of competent medical care.

Consistency in support of free enterprise (and avoidance of subsidy) does not mean dissolution; a return to first principles does not mean dissolution; support of good individual physician service does not mean dissolution. Surely we can well afford to pay a fair tax if we *must* be in the insurance business.

L. H. GARLAND, M.D.

The resolution in question was as follows:

RESOLUTION ON C.P.S.

Resolution No. 107

To Reference Committee No. C.P.S.

Introduced by: L. H. Garland, M.D.

Representing San Francisco

Date: April 30, 1961

WHEREAS, C.P.S. does not encourage the provision of a good quality of medical care when it provides inadequate allowances for many of its physician members; and

WHEREAS, C.P.S. has repeatedly been asked by the doctors of California to stress indemnity-type health coverage rather than service-type benefits; and

WHEREAS, it is scarcely logical for doctors who advocate private enterprise on the one hand to endorse a special tax-free status or public subsidy for C.P.S. on the other; and

WHEREAS, voluntary private-enterprise health insurance has progressed well in states without a doctor and tax-subsidy plan like C.P.S.; and

WHEREAS, the medical profession should not be in the insurance business, especially one with a total annual turnover of some \$57,000,000; now, therefore, be it

Resolved: That C.P.S. be directed to return to its original purpose of providing pilot sickness service programs for the lower income groups; and be it further

Resolved: That the C.M.A. Council give serious consideration to introducing legislation to repeal the tax-free status of C.P.S. so that if continued on its present scale it may compete fairly with regular private enterprise insurance companies that pay taxes; and be it further

Resolved: That C.P.S. be aided in gradual transference of its activities to regularly constituted and properly operated private voluntary health insurance companies.

NEWS & NOTES

NATIONAL • STATE • COUNTY

ALAMEDA

A visiting scientist from Sweden, Dr. Lars Söderhjelm, will be associated with Dr. Arild E. Hansen, research director, at the **Bruce Lyon Memorial Research Laboratory** of Children's Hospital of the East Bay, Oakland, California, during the next year. Dr. Söderhjelm is in this country on a grant from the National Institutes of Health of the U. S. Department of Health, Education, and Welfare. He is particularly interested in the problem of fat absorption in infants. During his year here, he will work on certain phases of lipid metabolism, particularly certain fundamental mechanisms involving B₆ metabolism.

LOS ANGELES

The tenth annual **conference of the U. S. Civil Defense Council** will be held October 16-20 at the Ambassador Hotel, Los Angeles, according to Dr. Justin Stein, chairman of the CMA Committee on Disaster Medical Care. The meeting is open to all. Details may be obtained from the conference chairman, Joseph J. Micicche, 6501 Fountain Avenue, Hollywood 28.

* * *

Research applications are now being accepted for 1962-63 support in the field of **cardiovascular research**, according to Dr. Edward Phillips, president of the Los Angeles County Heart Association. Applications for fellowship support, which includes research fellowships, advanced research fellowships and established investigatorships, must be received not later than October 15, 1961. Applications for grants-in-aid must be received on or before February 1, 1962.

Further information may be obtained from the Research Section at the Los Angeles County Heart Association, 2405 West Eighth Street, Los Angeles, phone DUnkirk 5-4231.

* * *

The **Western Industrial Health Conference** will hold its fifth annual meeting at the Biltmore Hotel, Los Angeles, on October 6 and 7, 1961.

An extensive program of general and special sessions has been planned by Dr. Clarence Lee Lloyd, president of the Western Industrial Medical Association, who is chairman of the Conference. Further information may be obtained from Dr. Henry G. Morgan, 1136 West Sixth St., Los Angeles 17.

* * *

Officers of the **Southwestern Pediatric Society** for the current year are president, Dr. Harry O. Ryan, Pasadena; vice-president, Dr. J. Harold Batzle, Riverside; and secretary, Dr. R. Wendell Coffelt, Burbank.

The organization will have four closed meetings in the coming year, with attendance by invitation: September 27, 1961, November 29, 1961, January 17, 1962, at the University Club, Los Angeles; and Spring two-day meeting at the Coronado Hotel, San Diego, on May 25 and 26.

* * *

The 1961-62 officers of the **Los Angeles Radiological Society** who took office on September 1, are: president, Dr. Robert B. Engle; vice-president, Dr. Denis C. Adler; treasurer, Dr. Walter L. Stilson; secretary, Dr. Saul Heiser.

The Society meets the second Wednesday of September, November, January, March and June at the Los Angeles County Medical Association Building.

SAN FRANCISCO

Out-of-state guest speakers who will give papers at the **San Francisco Heart Association's** thirty-first annual **postgraduate symposium**, to be held September 27-29 in San Francisco, are Drs. Eugene Braunwald of the National Heart Institute, Harry W. Fritts, Jr., of the College of Physicians and Surgeons of Columbia University, C. Walton Lillehei of the University of Minnesota Medical School, Gordon S. Myers of Harvard Medical School, Abraham M. Rudolph of the Albert Einstein College of Medicine and Robert W. Wilkins of Boston University School of Medicine.

SANTA CLARA

Dr. Hugh R. Butt of the Mayo Foundation, University of Minnesota, will deliver the first **Albert M. Snell Memorial Lectures** on Monday and Tuesday, October 16 and 17. The lectures will be given in the Palo Alto Community Center Theatre, both at 8 p.m. They are supported by the Albert M. Snell Memorial Fund, established in the Foundation by Dr. Snell's friends and colleagues upon his death in 1960. Dr. Butt's presentations will be the first of a biennial series. He has chosen as his topics, "Hepatic Coma: Clinical and Physiologic Implications" (October 16) and "The Hepatic Cell: Effect of Disease on Structure" (October 17).

GENERAL

The California Medical Association's **Bureau of Research and Planning** is urging all physicians in the state to participate in a study on the **characteristics of physicians** which will be conducted by the Bureau around the last week in September.

Every physician, regardless of whether he is a member of the California Medical Association, is asked to return promptly a questionnaire which the Bureau will send to him. When analyzed, the information on various aspects of medical practice will be of considerable interest and value to physicians in California, the Bureau said.

"The survey will also enable the C.M.A. Bureau to construct sampling surveys on a variety of subjects of socio-economic interest" that are planned for 1962, the Bureau concluded.

* * *

New drugs, medical quackery, future training programs and professional liability are among subjects to be considered by **medical assistants** when they gather October 13-15 at Reno, Nevada, for the fifth annual convention of the American Association of Medical Assistants.

More than 1,000 medical assistants are expected to attend the meeting at the Holiday Hotel to hear talks by physicians, professional management experts, educators and officials from governmental, pharmaceutical and military fields.

Dr. Leonard W. Larson, Bismarck, N. D., president of the American Medical Association, will address the group at a banquet October 15.

* * *

The **Third National Conference on the Medical Aspects of Sports** sponsored by the American Medical Association, under the auspices of the AMA Committee on the Medical Aspects of Sports, will be held in Denver, Colorado, at the Cosmopolitan Hotel on November 26, 1961. The Conference will be held in conjunction with the annual Clinical Meeting of the American Medical Association, November 26-30, 1961.

POSTGRADUATE EDUCATION NOTICES

THIS BULLETIN of the dates of postgraduate education programs and the meetings of various medical organizations in California is supplied by the Committee on Postgraduate Activities of the California Medical Association. In order that they may be listed here, please send communications relating to your future medical or surgical programs to Postgraduate Activities, California Medical Association, 693 Sutter Street, San Francisco 2.

STANFORD UNIVERSITY SCHOOL OF MEDICINE

Obesity and Adolescence. Saturday, 8:30 a.m. to 5:30 p.m., October 21. Eight hours. No fee.

For information on courses for physicians or ancillary personnel contact: Lowell A. Rantz, M.D., associate dean, Stanford University School of Medicine, 300 Pasteur Drive, Palo Alto.

UNIVERSITY OF CALIFORNIA AT LOS ANGELES

Clinical Traineeships — Anesthesia, Dermatology and Pediatric Cardiology. Dates by arrangement. Minimum period—two weeks. Fee: Two weeks, \$150.00; four weeks, \$250.00.

General Pediatrics. Thursday evenings, September 21 through December 14. Harbor General Hospital, Torrance. Thirty hours. Fee: \$50.00.

Teaching Clinics. September 21 through December 14, Thursday evenings. UCLA Medical Center, Room 13-105. 24 hours. Fee: \$60.00.

Elements of Psychiatry in Clinical Practice. Thursday evenings, October 1 through June 10. (Two conferences at Lake Arrowhead, plus weekly Thursday evening sessions.) Fee: \$162.50.†

Basic Science Course in Ophthalmology. Wednesday afternoons, October 18 to April 11. Forty-eight hours. Fee: \$175.00.

Low Back Pain. Saturday and Sunday, December 2 and 3.*†

Peripheral Vascular Disease. Friday and Saturday, December 1 and 16.*†

A Clinical Postgraduate Program in Mexico. February 21 through March 1. Fee: \$100.00.

A Clinical Postgraduate Program in Japan and Hong Kong. April 8 through 28. Fee: \$200.00.

For information on courses for physicians or ancillary personnel contact: Thomas H. Sternberg, M.D., assistant dean for Continuing Medical Education, U.C.L.A. Medical Center, Los Angeles 24. BRadshaw 2-8911, Ext. 7114.

UNIVERSITY OF CALIFORNIA, SAN FRANCISCO

Obstetrics and Gynecology. Thursday through Saturday, September 14 through 16. Twenty-one hours. Fee: \$50.00.

Internal Medicine—A Selective Review. Monday through Friday, September 18 through 22. Thirty-five hours. Fee: \$90.00 per month.

Psychotherapy in Medical Practice (Langley Porter). September 20 through December 6, Wednesdays. Forty-eight hours. Fee: \$25.00.

*Fees to be announced.

†Hours to be announced.

Nervous Patients in Everyday Practice—Oakland. (Highland Alameda County Hospital). September 23 through October 28, Saturday mornings. Fee: \$5.00.†

Neuropsychiatry in General Practice. Thursdays, September 28 through November 2. Napa Hospital. Twelve hours. Fee: \$5.00.

Evening Lectures in Medicine. Oakland Hospital, Tuesday evenings, October 3 through November 28. Sixteen hours. Fee: \$35.00.

Bone: Clinical Application of Recent Advances. Saturday through Monday, October 7 through 9. Twenty-one hours. Fee: \$50.00.

Urology: An Intensive Survey of Newer Concepts. Friday through Sunday, October 13 through 15. Twenty-one hours. Fee: \$60.00.

Man to Man: An Historical Overview. October 19 through December 14, Thursday evenings. Fee: \$10.00 (\$1.50 single admission). Ten hours.

Problems Due to Infection in Medicine and Surgery. Saturday and Sunday, October 28 and 29. Franklin Hospital. Fourteen hours. Fee: \$25.00.

Diagnosis in Ophthalmology. Thursday through Saturday, November 2 through 4. Twenty-one hours. Fee: \$60.00.

Problems of Adolescence. Children's Hospital, Saturday, November 4. Seven hours. Fee: \$12.50.

Alcohol and Civilization. Saturday through Monday, November 11 through 13. Twenty-one hours. Fee: \$25.00.

Psychiatry in General Practice. Napa State Hospital, Saturday and Sunday, November 18 and 19. Fourteen hours. Fee: \$10.00.

Hematology. Wednesday through Friday, November 29 through December 1. Eighteen hours. Fee: \$35.00.

Surgery of the Hand and Forearm. Friday through Sunday, December 1 through 3. Twenty-one hours.*

Diseases of the Cornea. Thursday through Saturday, December 7 through 9. Eighteen hours. Fee: \$50.00.

Psychiatry in Everyday Practice (Stockton State Hospital). December 9 and 10, Saturday and Sunday.*†

Skin Problems in Children. Saturday, January 13, 1962. Children's Hospital. Seven hours. Fee: \$12.50.

A Clinic on Human Disability (Morrison Center for Rehabilitation). January 19 and 20, Friday and Saturday.*†

Man and Civilization: Control of the Mind, Part II. Saturday through Monday, January 27 through 29. Seven hours. Fee: \$25.00.

Psychotherapy in Medical Practice (Langley Porter). January 31 through April 18, Wednesdays. Forty-eight hours. Fee: \$25.00.

Evening Lectures in Medicine (Brookside Hospital, Richmond). February 1 through March 15, Thursday evenings. Twelve hours.*

Dermatology. Friday through Saturday, February 9 and 10. Fourteen hours. Fee: \$40.00.

Course for Physicians in General Practice (Mount Zion Hospital). February 26 through March 2, Monday through Friday. Fee: \$85.00.†

Child Development. Saturday, March 10. Seven hours. Children's Hospital.*

Diagnostic Radiology. March 14 through 18, Wednesday through Sunday. Fee: \$80.00.†

Fundamental Practices of Radioactivity and the Diagnostic and Therapeutic Use of Radioisotopes. Two or three month course limited to one enrollee per month. Fee: \$350.00.

For information on courses for physicians or ancillary personnel contact: Department of Continuing Medical Education in Medicine and Health Sciences, University of California Medical Center, San Francisco 22. MONTROSE 4-3600, Ext. 665.

PRESBYTERIAN MEDICAL CENTER, SAN FRANCISCO

Conference on Allergy. November 11, Saturday. Eight hours. Fee: \$25.00.

Conference on Arthritis. December 9, Saturday. Eight hours. Fee: \$25.00.

Conference on Proctology. January 5, Friday. Eight hours. Fee: \$25.00.

Conference on Office Diagnosis. January 20, Saturday. Eight hours. Fee: \$25.00.

Conference on Office Gynecology and Obstetrics. February 5, Monday. Eight hours. Fee: \$25.00.

Conference on Eye, Ear, Nose and Throat. February 17, Saturday. Eight hours. Fee: \$25.00.

Conference on the Hand and Foot. March 10, Saturday. Eight hours. Fee: \$25.00.

Conference on Emergencies. March 24, Saturday. Eight hours. Fee: \$25.00.

Contact: Arthur Selzer, M.D., program committee chairman, Presbyterian Medical Center, Clay and Webster Sts., San Francisco 15, WEst 1-8000, Ext. 303 or 414.

UNIVERSITY OF SOUTHERN CALIFORNIA, LOS ANGELES

Basic Home Course in Electrocardiography. One year postgraduate series, electrocardiogram interpretation by mail. Physicians may register at any time and receive all 52 issues. Fifty-two weeks. Fee: \$100.00.

Advanced Home Course in Electrocardiography. One year postgraduate series, electrocardiogram interpretation by mail. Fifty-two issues: \$85.00. Physicians may register at any time.

Intensive Review of Internal Medicine. Monday through Friday, September 11 through 22, 8:30 a.m. to 12:30 p.m., Los Angeles County Hospital. Fee: \$65.00.

Bedside Clinics and Set Clinics in Internal Medicine. Thursday evenings, October 5 through January 11, 1962, 7:30 to 9:30 p.m. Los Angeles County Hospital. Fee: \$65.00.

Dermal Pathology. Friday and Saturday, October 20 and 21. Ambassador Hotel. Fee: \$37.50 includes one luncheon and coffee break.

Funduscopy in Internal Medicine. Tuesday evenings, November 7 through November 28, 7 to 9 p.m. Los Angeles County Hospital. Fee: \$37.50. Enrollment limited to 20.

Review of Recent and Practical Problems in Medicine (Homecoming). Thursday and Friday, November 9 and 10, Statler Hotel, Los Angeles.*

Symposium on Anticoagulant Therapy. Friday, November 24. Fee: \$25.00.

Bedside Cardiology. Thursday evenings, February 8 through April 26, 1962, 7:30 to 9:30 p.m. Los Angeles County Hospital.

Refresher Course to be held in Western Europe. Dates to be announced.

Hawaii Course. Summer of 1962.

Contact: Phil R. Manning, M.D., Associate Dean and Director, Postgraduate Division, University of Southern California School of Medicine, 2025 Zonal Avenue, Los Angeles 33. CApital 5-1511.

LOMA LINDA UNIVERSITY

Clinical Traineeships available in clinical departments by arrangement with Postgraduate Division and Postgraduate Chairman of department involved. In addition to those listed other traineeships in other departments can be arranged. Eighty hours minimum. Limited enrollment. Begin when individually arranged.

1. **Anesthesia.** Six months. 250 to 300 hours. Fee: \$350.00.

2. **Internal Medicine.** Two weeks to nine months.

3. **Pulmonary Diseases** (can be arranged).

4. **Traumatology.** One month. 160 hours. Fee: \$125.00.

5. **Urology** (can be arranged).

Refresher Courses: General Surgery, Internal Medicine, Obstetrics-Gynecology. Los Angeles Campus (White Memorial Hospital). March 11 and 12, Sunday and Monday. **Contact:** Alumni Association, School of Medicine, 316 No. Bailey Street, Los Angeles 33, AN 2-2173.

For information contact: Division of Postgraduate Medicine, Loma Linda University, 1720 Brooklyn Ave., Los Angeles 33. ANgelus 9-7241, Ext. 214.

Illustrated Medical Lectures: Thirty-minute tape recordings and accompanying 35 mm. filmstrip, 50 to 80 full-color pictures for screen, hand or desk viewer. Available individually or by subscription. Twelve or 36 titles per year, all titles produced in one year in any chosen specialty. Projectors and viewers included in subscription plans. **Contact:** Loma Linda University, Illustrated Medical Lectures, Los Angeles 33.

CALIFORNIA MEDICAL ASSOCIATION POSTGRADUATE CIRCUIT COURSES

Sacramento Valley Counties in Redding, Chico, Marysville, and Auburn in cooperation with University of California San Francisco School of Medicine. Begins week of September 18, 1961.

North Coast Counties in Eureka, Ukiah and Napa in cooperation with Stanford University School of Medicine. Begins week of September 18, 1961.

West Coast Counties in cooperation with Stanford University School of Medicine on Friday, October 20, 1961, at Sister's Hospital, Santa Maria, and on Saturday, October 21, 1961, The General Hospital, San Luis Obispo.

POSTGRADUATE INSTITUTES—1962

Southern Counties in cooperation with University of California Los Angeles School of Medicine. Balboa Bay Club, Balboa. February 8 and 9, 1962. **Chairman:** Bertram L. Tesman, M.D., 1781 West Romneya Drive, Anaheim, California.

West Coast Counties in cooperation with University of Southern California School of Medicine, Del Monte Lodge, Pebble Beach. March 8 and 9, 1962. **Chairman:** Joseph E. Turner, M.D., 1073 Cass Street, Monterey.

North Coast Counties, in cooperation with Stanford University School of Medicine. Hoberg's Resort, Lake County, March 29 and 30, 1962. **Chairman:** Lucius L. Button, M.D., 1102 Montgomery Drive, Santa Rosa.

San Joaquin Valley in cooperation with University of California San Francisco School of Medicine. Ahwahnee Hotel, Yosemite. May 3 and 4, 1962. **Chairman:** Samuel Ross, M.D., 2946 Fresno Street, Fresno.

Sacramento Valley Counties in cooperation with Loma Linda University. Lake Tahoe. June 21 and 22, 1962. (Chairman to be announced.)

AUDIO-DIGEST FOUNDATION

A nonprofit subsidiary of California Medical Association, offers a subscription series of hour-long tape recordings condensing highlights of important literature and leading national meetings. Designed to be heard in the automobile, home or office. Six different services are offered—General Practice, Surgery, Internal Medicine, Obstetrics-Gynecology, Pediatrics, and Anesthesiology. Also, just compiled and released is a Catalog of Classics, offering panel discussions and symposia on specific subjects in all specialties. For information contact Mr. Claron L. Oakley, Editor, 619 So. Westlake Avenue, Los Angeles 57, HUbbard 3-3451.

Medical Dates Bulletin

SEPTEMBER MEETINGS

SOUTHERN CALIFORNIA CHAPTER, NATIONAL KIDNEY DISEASE FOUNDATION, INC. First Professional Kidney Symposium, Ambassador Hotel, Los Angeles, September 13, 9:00 a.m. to 5:00 p.m. Fee: \$12.50 (includes lectures and lunch). *Contact:* Mrs. Jean Gordon, administrative assistant, 1227½ South La Brea, Los Angeles 19.

LOS ANGELES PEDIATRIC SOCIETY Meeting. The use of Amphetamine Tranquilizers and Psychic Energizers in Pediatrics, September 14, 6:30 p.m. Los Angeles County Medical Association Building, 1925 Wilshire Boulevard, Los Angeles. *Contact:* Leslie M. Holve, M.D., secretary, 1015 Gayley, Los Angeles 24.

ST. JOHN'S HOSPITAL Postgraduate Assembly, September 14 through 16. St. John's Hospital, 1328 22nd St., Santa Monica. *Contact:* John C. Eagan, M.D., director, 1328 22nd St., Santa Monica.

SANTA BARBARA COUNTY HEART ASSOCIATION and VENTURA COUNTY HEART ASSOCIATION Sixth Annual Symposium on Cardiovascular Disease, September 16, 9 a.m. to 5 p.m. Santa Barbara Biltmore Hotel. *Contact:* Mrs. Sara Clyde, executive director, 18 La Arcada Court, Santa Barbara. Robert E. Wolf, executive director, 3451 Foothill Rd., Ventura.

WASHINGTON STATE MEDICAL ASSOCIATION Annual Convention, September 17 through 20. Olympic Hotel, Seattle, Wash. *Contact:* R. W. Neill, 1309 7th Ave., Seattle.

SAN FRANCISCO HEART ASSOCIATION 31st Annual Postgraduate Symposium, September 27 through 29, St. Francis Hotel, San Francisco. *Contact:* Gene Taylor, executive director, 259 Geary Street, San Francisco 2.

CALIFORNIA SOCIETY OF INTERNAL MEDICINE Annual Meeting, September 29 through October 1. Hotel del Coronado, Coronado. *Contact:* Philip L. Pillsbury, M.D., secretary-treasurer, 350 Post Street, San Francisco 8.

OCTOBER MEETINGS

KAISER FOUNDATION HOSPITALS IN NORTHERN CALIFORNIA Fifth Annual Symposium on Immunology and Autoimmune Disease, October 6 and 7, Fairmont Hotel, San Francisco. *Contact:* Martin A. Shearn, M.D., director of medical education, 280 West MacArthur Blvd., Oakland.

WESTERN INDUSTRIAL MEDICAL ASSOCIATION Western Occupational Health Conference, October 6 and 7, Biltmore Hotel, Los Angeles. *Contact:* B. M. Brundage, M.D., Medical Director, Atomics International, P. O. Box 309, Canoga Park, Calif.

AMERICAN CANCER SOCIETY, CALIFORNIA DIVISION Cancer Conference for Physicians, October 11, 3:00 to 9:00 p.m., Del Coronado Hotel, San Diego. *Contact:* Miss Jane Lounsbury, 467 O'Farrell Street, San Francisco 2.

AMERICAN CANCER SOCIETY ANNUAL MEETING, October 12 through 14, Del Coronado Hotel, San Diego. *Contact:* Miss Jane Lounsbury, 467 O'Farrell Street, San Francisco 2.

LOS ANGELES COUNTY HEART ASSOCIATION Professional Symposium, October 11 and 12, 9 a.m. to 5 p.m., Statler Hilton Hotel, Los Angeles. *Contact:* Edward Shapiro, M.D., chairman, Professional Symposium Committee, 2405 W. 8th St., Los Angeles 57.

SEQUOIA HOSPITAL FOURTH ANNUAL SYMPOSIA, "Man and His Environment," October 14, 8:30 a.m. Sequoia Hospital, Redwood City. *Contact:* Eldon E. Ellis, M.D., program chairman, Sequoia Hospital, Redwood City.

CALIFORNIA ACADEMY OF GENERAL PRACTICE Scientific Assembly, October 15 through 18, Statler Hilton Hotel, Los Angeles. *Contact:* William W. Rogers, Exec. Secretary, 461 Market Street, San Francisco 5.

FIRST ALBERT M. SNELL MEMORIAL LECTURES to be delivered by Hugh R. Butt, M.D. October 16 and 17. Topics: "Hepatic Coma: Clinical and Physiologic Implications" on Monday, and "The Hepatic Cell: Effect of Disease on Structure" on Tuesday. Palo Alto Community Center Theatre at 8:00 p.m. *Contact:* Marcus A. Krupp, M.D., Palo Alto Medical Research Foundation, 860 Bryant Street, Palo Alto.

SOUTHWESTERN MEDICAL ASSOCIATION 43rd Annual Meeting, October 19 through 21. Tropicana Hotel, Las Vegas, Nevada. Registration: \$25 (includes 2 roundtable discussion luncheons). *Contact:* Mott, Reid, and McFall, 310 North Stanton Street, El Paso, Texas.

WEST COAST PSYCHOANALYTIC SOCIETIES Meeting, Beverly Hills, October 21 and 22. *Contact:* Executive Secretary, Los Angeles Institute for Psychoanalysis, 344 North Bedford Drive, Beverly Hills.

ST. JUDE HOSPITAL POSTGRADUATE ASSEMBLY, Fullerton, October 22, all day beginning at 8:30 a.m. *Contact:* B. L. Tesman, M.D., St. Jude Hospital, Fullerton.

AMERICAN SOCIETY OF ANESTHESIOLOGISTS, INC., October 22 through 27, Statler Hilton, Los Angeles. *Contact:* Mr. John W. Andes, executive secretary, 515 Busse Highway, Park Ridge, Illinois.

CALIFORNIA CONFERENCE OF LOCAL HEALTH OFFICERS Fall Meeting, Woodland, Calif., October 25 and 26. *Contact:* Donald G. Davy, M.D., assistant to chief, Division of Community Health Services, Dept. of Public Health, Berkeley 4.

KERN COUNTY GENERAL HOSPITAL Postgraduate Conference and Alumni Day, October 27, 7:30 a.m. to 5:00 p.m. *Contact:* George A. Paulsen, M.D., chairman, Postgraduate Conference Committee, Kern County General Hospital, 1830 Flower Street, Bakersfield.

SAN DIEGO COUNTY HEART ASSOCIATION Eleventh Annual Symposium, San Diego Veterans War Memorial Building, October 27 and 28. *Contact:* O. M. Avison, executive director, 3545 Fourth Avenue, San Diego 3.

NOVEMBER MEETINGS

AMERICAN COLLEGE OF PHYSICIANS Southern California Region 4th Annual Basic Science Lecture Dinner, Statler Hilton, Los Angeles, November 1, 6:30 p.m. *Contact:* George C. Griffith, M.D., governor, Box 25, 1200 North State Street, Los Angeles 33.

SAN DIEGO COUNTY GENERAL HOSPITAL Fifteenth Annual Postgraduate Assembly. November 1 and 2. No registration fee. *Contact:* David E. Wile, M.D., chairman, San Diego County General Hospital, San Diego.

PRESBYTERIAN MEDICAL CENTER "All Day" Clinical Conference in Ophthalmology. November 4, 9:00 a.m., Lane Hall, Presbyterian Medical Center, San Francisco. *Contact:* J. W. Bettman, M.D., chief of ophthalmology, 2351 Clay Street, San Francisco 15.

LOS ANGELES PEDIATRIC SOCIETY (of Los Angeles County Medical Association) Annual Brennemann Lecture Series. Ambassador Hotel, Los Angeles, November 8 and 9. *Contact:* Leslie M. Holve, M.D., secretary, 1015 Gayley, Los Angeles 24.

PACIFIC COAST FERTILITY SOCIETY Tenth Annual Meeting. El Mirador Hotel, Palm Springs, November 9 through 12. *Contact:* Gregory Smith, M.D., secretary, 909 Hyde Street, San Francisco 9.

SAN DIEGO CHAPTER, CALIFORNIA ACADEMY OF GENERAL PRACTICE Fifth Annual Meeting. November 9 through 11, Riviera Hotel, Las Vegas. *Contact:* George H. Burkhart, M.D., 514 Third Ave., Chula Vista.

CALIFORNIA ACADEMY OF GENERAL PRACTICE CONFERENCE ON MEDICAL AUDITS. November 15, 10:00 a.m. to 5:00 p.m., Jack Tar Hotel, San Francisco. *Contact:* William W. Rogers, executive secretary, 9 First Street, San Francisco 5.

CALIFORNIA ACADEMY OF GENERAL PRACTICE CONFERENCE ON MEDICAL AUDITS. November 16, 10:00 a.m. to 5:00 p.m., Huntington-Sheraton Hotel, Pasadena. *Contact:* William W. Rogers, executive secretary, 9 First Street San Francisco 5.

PACIFIC COAST COLLEGE HEALTH ASSOCIATION. November 20 through 22, Claremont Hotel, Berkeley. *Contact:* Henry B. Bruyn, M.D. chairman, Cowell Memorial Hospital, University of California, Berkeley 4.

WESTERN SURGICAL ASSOCIATION. November 29 through December 1, St. Francis Hotel, San Francisco. *Contact:* Walter W. Carroll, M.D., secretary, 700 N. Michigan Ave., Chicago 11.

DECEMBER MEETINGS

AMERICAN COLLEGE OF CHEST PHYSICIANS Seventh Annual Postgraduate Course on Diseases of the Chest. December 4 through 8, 9:00 a.m. to 5:00 p.m. daily, Statler Hilton Hotel, Los Angeles. *Contact:* Mr. Murray Kornfeld, executive director, 112 East Chestnut Street, Chicago 11, Illinois.

POSTGRADUATE COURSE IN CARDIOLOGY. December 5 through 8. Institute for Cardio-Pulmonary Diseases. Scripps Clinic and Research Foundation, La Jolla, California. *Contact:* John Carson, M.D., associate program director, Scripps Clinic, La Jolla.

1962 MEETINGS

LOS ANGELES COUNTY HEART ASSOCIATION Sixth Midwinter Professional Symposium. January 10, Statler Hilton Hotel, Los Angeles. *Contact:* Robert Stivelman, M.D., chairman, Professional Symposium Committee, Los Angeles County Heart Association, 2405 W. 8th Street, Los Angeles 57.

AMERICAN COLLEGE OF SURGEONS Sectional Meeting. Statler-Hilton and Biltmore Hotels, Los Angeles, January 29 through February 1. *Contact:* William E. Adams, M.D., secretary, 40 E. Erie Street, Chicago 11.

FOURTEENTH ANNUAL MIDWINTER RADIOLOGICAL CONFERENCE sponsored by Los Angeles Radiological Society, February 3 and 4, Biltmore Hotel, Los Angeles. Fee: \$25.00 includes two luncheon meetings. Banquet, Saturday evening, Biltmore Bowl, \$7.50 per person. *Contact:* V. G. Mikity, M.D., 2010 Wilshire Blvd., Los Angeles 57.

TUBERCULOSIS AND HEALTH ASSOCIATION OF CALIFORNIA Annual Meeting. El Cortez Hotel, San Diego, February 7 through 10. *Contact:* Mr. Wm. Phraener, coordinator, public relations, 130 Hayes Street, San Francisco.

AMERICAN COLLEGE OF PHYSICIANS ANNUAL SOUTHERN CALIFORNIA Regional Meeting. El Mirador Hotel, Palm Springs, February 16 through 18. Submit abstracts to Walter S. Graf, 3701 Stocker Street, Los Angeles, by Nov. 1, 1961. *Contact:* George C. Griffith, M.D., governor, Box 25, 1200 North State Street, Los Angeles 33.

PACIFIC COAST SURGICAL ASSOCIATION Annual Meeting. Sheraton Hotel, Portland, Oregon, February 18 through 21. *Contact:* Carleton Mathewson, M.D., Presbyterian Medical Center, San Francisco.

SOUTHWESTERN PEDIATRIC SOCIETY Spring Lecture Series. Evening of March 6 and all day March 7, Statler Hotel, Los Angeles. *Contact:* R. W. Watson, 504 So. Sierra Madre Boulevard, Pasadena.

ANESTHESIA SECTION OF THE LOS ANGELES COUNTY MEDICAL ASSOCIATION Seventh Annual Spring Postgraduate Meeting. Statler Hilton, Los Angeles, March 10 and 11. *Contact:* Thomas W. McIntosh, M.D., 686 East Union Street, Pasadena.

COLLEGE OF MEDICAL EVANGELISTS Alumni Postgraduate Convention. March 13 through 15, 1962, Ambassador Hotel, Los Angeles. *Contact:* Kenneth H. Abbott, M.D., general chairman, 316 No. Bailey Ave., Los Angeles 33.

AMERICAN ORTHOPSYCHIATRIC ASSOCIATION, Inc., Biltmore Hotel, Los Angeles, March 21 through 24. *Contact:* Dr. Marion F. Langer, 1790 Broadway, New York 19.

INTERNATIONAL COLLEGE OF APPLIED NUTRITION Annual Convention. Huntington-Sheraton Hotel, Pasadena, March 22 and 23. *Contact:* Donald C. Collins, M.D., secretary, Suite 503, 7046 Hollywood Blvd., Hollywood 28.

AMERICAN ACADEMY OF GENERAL PRACTICE. Las Vegas, Nevada. April 6 through 13. *Contact:* Mr. Mac F. Cahal, executive director, Volker Blvd. at Brookside, Kansas City 12, Mo.

CALIFORNIA MEDICAL ASSISTANTS ASSOCIATION ANNUAL MEETING April 7 and 8, Sir Francis Drake Hotel, San Francisco. April 7: 9 a.m. to 5 p.m. April 8: 9 a.m. to 3 p.m. *Contact:* Helen Goldman, president, 693 Sutter Street, San Francisco.

CALIFORNIA MEDICAL ASSOCIATION Annual Session, Fairmont Hotel, San Francisco. April 15 through 18, 1962. *Contact:* John Hunton, executive secretary, 693 Sutter St., San Francisco 2, or Ed Clancy, director of public relations, 2975 Wilshire Blvd., Los Angeles 5.

CALIFORNIA HEART ASSOCIATION ANNUAL MEETING. Rickety's Studio Inn, Palo Alto. May 18 through 20. *Contact:* Brian O'Connell, executive director, California Heart Association, 1370 Mission Street, San Francisco 3.

AMERICAN PUBLIC HEALTH ASSOCIATION WESTERN BRANCH's Annual meeting. Sheraton-Portland Hotel, Portland. June 4 through 8. *Contact:* Robert E. Mytinger, director, executive office, 693 Sutter Street, San Francisco 2.



THE PHYSICIAN'S *Bookshelf*

DYNAMIC PSYCHIATRY IN SIMPLE TERMS—Second Edition—Robert R. Mezer, M.D., Assistant Professor of Psychiatry, Boston University Medical School, and Associate Visiting Physician in Psychiatry, Massachusetts Memorial Hospitals. Foreword by Harry C. Solomon, M.D. Springer Publishing Company, Inc., 44 East 23rd Street, New York 10, N. Y., 1960. 178 pages, \$2.75.

Dr. Robert Mezer, Assistant Professor of Psychiatry, Boston University Medical School has had years of teaching experience in presenting psychiatry to students of medicine, nursing and social work. In this book, he has put this experience to good use in briefly outlining in simple layman's language, the emotional development of the individual, the classical psychiatric concepts and standard classifications of mental and emotional illness and a critical review of psychological and somatic treatment. His definitions, examples and explanations are clear-cut and easily understandable to the layman or the beginning student to whom psychiatry is all too frequently a hazy muddle of meaningless technical terminology. To the psychiatrically unsophisticated, it is an excellent introductory outline.

FRANK F. TALLMAN, M.D.

VALVULAR DISEASE OF THE HEART IN OLD AGE—P. D. Bedford, M.D., M.R.C.P., Consultant Physician to the Cowley Road Hospital, Oxford; and F. I. Caird, D.M., M.R.C.P., Medical Registrar; lately Senior House Physician, Cowley Road Hospital, Oxford. Little, Brown and Company, 34 Beacon Street, Boston 6, Mass., 1960. 194 pages, 38 illustrations, \$7.50.

This small volume is a personal account of 3,000 patients, 65 years and over who were admitted to the Geriatric Service of the Cowley Road Hospital, Oxford. The clinical features and prognoses of all valvular diseases observed during this period are discussed in detail. This study is of great importance because it is a prospective study by an obviously qualified physician who attempted to answer many of the questions regarding valvular diseases in the aged, and many of his findings are of considerable interest.

The author commented that a consistent clinical manifestation of diseases of the aged is mental confusion, and this is true even in heart disease. He emphasizes a variety of clinical observations such as the value of orthopnea for distinguishing pulmonary from cardiac dyspnea, the relative importance of cough in cardiac failure and the lack of significance of the state of the radial vessel wall in the assessment of heart disease. Atrial fibrillation is a very important prognostic factor in congestive failure in the elderly and is a turning point in the life history of rheumatic heart disease, even after the age of 65. The author is convinced that mitral insufficiency is the dominant hemodynamic lesion in the majority of elderly patients.

Details are given of the history, physical and autopsy findings and diagnostic difficulties in pulmonary heart disease, aortic stenosis, aortic incompetence and syphilitic aortic incompetence. Chapters on the natural history of each of these diseases are of considerable value and the

complications in his 419 patients are discussed with considerable insight.

Prognoses are discussed and illustrated with a variety of significant tables providing some of the best data of which the reviewer is aware on the valvular diseases. The "life table method" and the comparison of the actual with the expected mortality is discussed in detail in the appendix. There is a first class bibliography for those who wish to pursue the subject further.

The monograph can be recommended highly.

MAURICE SOKOLOW, M.D.

TEXTBOOK OF PATHOLOGY, A—An Introduction to Medicine—7th Edition, Thoroughly Revised—William Boyd, M.D., Dipl. Psychiat., M.R.C.P. (Edin.), Hon. F.R.C.P. (Edin.), F.R.C.P. (Lond.), F.R.C.S. (Can.), F.R.S. (Can.), LL.D. (Sask.), (Queen's), D.Sc. (Man.), M.D. (Oslo). Professor Emeritus of Pathology, The University of Toronto; Visiting Professor of Pathology, The University of Alabama; Formerly Professor of Pathology, The University of Manitoba and the University of British Columbia. Lea & Febiger, 600 South Washington Square, Philadelphia 6, Pa., 1961. 1370 pages, 792 illustrations and 20 plates in color, \$18.00.

Dr. Boyd has rewritten this well-known textbook in line with present-day thinking of pathologic processes as more than morphologic patterns. He deals with them as complex disorders involving chemical and functional changes that express themselves through alterations in tissue structure. This approach has resulted in greater emphasis upon principles of disease than in previous editions, although regional pathology still makes up about two-thirds of the book.

The material covered has been expanded, largely through the consideration of physiological aspects and of the relationship of lesions to symptoms of disease. Several new chapters present topics of recently acquired importance, such as immunity and hypersensitivity, ionizing radiation, and medical genetics. The illustrations, including many electron micrographs, are derived mostly from photographs and in general depict their lesions successfully. The book has been set in double column type which is easy to read.

As in his other writings on pathology Dr. Boyd has used his artistry with words to make vivid descriptions and comments that provide interesting reading. The student of medicine at any stage of his development will find this book enjoyable as well as informative. The author has expressed his own awareness of his problem as a single individual of providing an authoritative account of so many diverse areas of medical knowledge as are encompassed by modern pathology. In this difficult task he has succeeded in a large measure through an effort to include all important new advances and to merge them with existing concepts. This has led in places to speculation that is difficult to distinguish from more generally accepted conclusions but in most fields the discussion provides a good survey of current knowledge about disease.

ALVIN J. COX, M.D.

NEUROMUSCULAR DISORDERS (The Motor Unit and Its Disorders). Proceedings of the Association for Research in Nervous and Mental Disease, Volume XXXVIII, December 12 and 13, 1958, New York, N. Y. Raymond D. Adams, M.D., Lee M. Eaton, M.D., and G. Milton Shy, M.D., editors. The Williams & Wilkins Company, Baltimore 2, Maryland, 1960. 813 pages, \$20.00.

This monograph consists of 28 papers, specially prepared for publication, but based on oral presentations at the 38th annual meeting of the Association for Research in Nervous and Mental Diseases, in December, 1958. While the authors are predominantly American, Puerto Rican, Danish, Swedish, and English neurology are represented.

The subject, Neuromuscular Disorders, is dealt with in terms not only of the muscle cell, but also of the myoneural junction and the lower motor neurone. The major headings are: basic structure and function of the motor unit, experimental pathology, basic approach to clinical problems and experimental techniques of promise in the study of neuromuscular disorders. While 28 papers of an average length of less than 30 pages, each dealing with a separate, though related subject, do not allow an exhaustive presentation of each subject, the preparation and documentation is excellent, and the bibliography extensive.

Though neurochemical, neurophysiological and neuropathological approaches are presented, the design is primarily for the benefit of the clinical investigator and physician; giving an up-to-date account, not only of clinical states, but also of recent advances in biological and physical investigations and investigative methods. Such an account has been wanting in this field with its many unsolved disease entities.

This monograph seems an excellent reference source for any general physician, or particular clinical investigator. It is an ideal volume for browsing through to find portions of personal interest—but once this is done, there is liable to occur a need to read some more.

I consider this monograph an excellent contribution to the neurological literature, but its impact should be felt well beyond the confines of orthodox neurology.

DONALD MACRAE, M.D.

RESPIRATION—Physiologic Principles and Their Clinical Applications. German edition written by P. H. Rossler, A. A. Bühlmann, and K. Wiesinger (Department of Medicine, Zurich University Medical School) and published under the title of *Physiologie und Pathophysiologie der Atmung* (newest second edition) by Springer-Verlag, Berlin-Göttingen-Heidelberg. Edited and Translated from the German Edition by Peter C. Luchsinger, M.D., Chief of Pulmonary Physiology Research Laboratory, Mt. Alto Veterans Administration Hospital, Washington, D. C.; Assistant Professor of Medicine, Georgetown University School of Medicine, Washington, D. C.; and Kenneth M. Moser, M.D., Head of Chest and Contagious Disease Branch, U. S. Naval Hospital, National Naval Medical Center, Bethesda, Md.; Instructor in Medicine, Georgetown University School of Medicine, Washington, D. C. C. V. Mosby Company, 3207 Washington Boulevard, St. Louis 3, Mo., 1960. 505 pages, \$15.75.

Within present-day trends of integrating physiological and biochemical principles into the practice of clinical medicine, respiratory physiology has only recently become a field of interest of the clinician. Only a decade ago "pulmonary function laboratories" were virtually nonexistent, except as domains of pure research. Today no important medical center can afford to omit this facility. Consequently, several books dealing with pure and applied physiology of the respiration appeared recently. This volume, as indicated above, is a translation of a textbook written by a Swiss team which has appeared in two German language editions within three years. Yet, it is more than a routine translation of a book written in another language; one of the American editors and translators of the book has worked with the

Swiss team and collaborated in their writing of the two original editions. Drs. Luchsinger and Moser have re-edited the book, emphasizing viewpoints prevalent in this country and commenting on others. They included tables comparing the "Zurich terminology" and the "American terminology" to make it easier for the American reader to follow. As a result of their efforts they came out with an excellent volume, perhaps the most comprehensive in the field. The book consists of four sections: (1) Normal physiology of the respiration; (2) investigative methods in pulmonary function; (3) pathophysiology of respiration and (4) pulmonary insufficiency in clinical practice. Appended to the book is a section on bibliography 80 pages long, wherein articles are listed alphabetically by authors in short sections arranged by subjects and following the same order as that of the text. The text is illustrated by numerous tables and diagrams and the quality of print and reproduction is high.

The presentation of the text is clear and understandable. The mathematics is relatively easy to follow. Methodology and apparatus are described in sufficient detail to be a valuable guide for those engaged in pulmonary function work. To the clinician section four is of most interest. Chapters on emphysema, asthma, cor pulmonale, tuberculosis and other pulmonary diseases cover the field well, contain up-to-date information regarding etiology, diagnosis and treatment. The last three chapters are devoted to subjects not often covered in books of this type: influence of nonpulmonary factors on pulmonary function (obesity, electrolyte disturbance, anesthesia, pharmacological agents); high altitude breathing, and pulmonary function of athletes. In general, this volume is unquestionably an important contribution to the subject. It is recommended not only to "pulmonary function" specialists and to investigators, but also to clinicians interested in the broad field of diseases of the chest.

A. SELZER, M.D.

LAENNEC—HIS LIFE AND TIMES—Roger Kervran, M.D. Translated from the French by D. C. Abrahams-Curiel. Pergamon Press, Inc., 122 East 55th Street, New York 22, N. Y., 1960. 213 pages, \$3.50.

Both author and translator have done an excellent job in this book about the frail consumptive, Laennec, who accomplished so much in spite of his disease. Most of those who know about his work are unaware of his Breton origin, his youth at the tragic time of the Revolution and the difficulties with which he had to cope in coming to Paris. Laennec's life as a person is woven into his medical life, and the story of his final scientific triumph, his book on Mediate Auscultation is once more presented in vivid and sympathetic style. Laennec died in 1826 at the age of forty-five, in the year his great book appeared, which has left its mark for all time on the subject of physical diagnosis and pulmonary tuberculosis.

ARTHUR L. BLOOMFIELD, M.D.

ARTHUR E. HERTZLER: THE KANSAS HORSE-AND-BUGGY DOCTOR—Edward H. Hashinger, Professor Emeritus of Medicine and Gerontology and Lecturer in the History of Medicine, University of Kansas School of Medicine. Ninth Series of the Logan Clendenen Lectures on the History and Philosophy of Medicine. University of Kansas Press, Lawrence, Kansas, 1961. 37 pages, \$2.00.

This is a very short biography of a famous American physician which unfortunately gives little information of his personality and accomplishments. It includes Dr. Hertzler's bibliography and a few photographs of the setting in which he lived and worked.

DWIGHT L. WILBUR, M.D.

ADVANCES IN BLOOD GROUPING—Alexander S. Wiener, M.D., F.A.C.P., Senior Bacteriologist (Serology) to the Office of the Chief Medical Examiner of New York City, Adjunct Associate Professor in the Department of Forensic Medicine of the N. Y. U. Postgraduate Medical School, and Attending Immunohematologist to the Jewish and Adelpi Hospitals of Brooklyn, N. Y. Grune & Stratton, Inc., 381 Park Avenue South, New York 16, N. Y., 1961. 549 pages, \$11.00.

This is a very comprehensive and thorough coverage of advances in blood grouping. The author has done an excellent job in selecting both the authors and the matter included in their articles. This book should serve as a very ready source of reference on many subjects in this very complicated field of medicine. Anyone interested in blood grouping and the problems associated with it, should have this book at hand.

JOHN S. LAWRENCE, M.D.

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GENERAL ANAESTHESIA—Volumes 1 and 2—Edited by Frankis T. Evans, M.B., B.S., F.F.A.R.C.S., D.A., Anaesthetist, St. Bartholomew's Hospital, St. Mark's Hospital for Rectal Disease, and Royal Masonic Hospital, London; and Cecil Gray, M.D., F.F.A.R.C.S., D.A., Professor of Anaesthesia, University of Liverpool. Volume 1—Basic Principles; Volume 2—Techniques, Special Fields and Hazards. Butterworth, Inc., 7235 Wisconsin Avenue, Washington, D. C., 1959. 962 pages, plus indices, \$29.50 per set.

This text is published in two volumes. Since there is no clear distinction from the standpoint of content, it appears that the separation into two units is due to the bulk of the material presented.

The purchaser of this text will need to ask himself whether or not he wishes to have one text provide him with answers (of varying depth) to many aspects of the practice of anesthesia that are essential but nevertheless peripheral to problems arising from the usual practice of anesthesia. For example, the text contains much material from the basic sciences written by competent men in their respective fields of anatomy, physiology, neurology, etc. This material is certainly pertinent to the sound practice of anesthesia, but the reviewer wonders if it needs to be included in relative detail when the same material is available in standard texts of anatomy, physiology, etc. The reviewer believes that it could be condensed significantly and the association with anesthesia made more prominent without detracting from the usefulness of the material. More than one hundred pages of basic neuroanatomy and physiology with limited effort to relate it to anesthetic practice seems a bit out of proportion.

As a matter of fact, the reviewer is somewhat concerned about the balance of material in the text. For example, the section on equipment is no longer than the sections on controlled hypotension and hypothermia, and there could be debate about the relative frequency of use of anesthetic apparatus and rather special technics such as hypothermia and hypotension. As so often happens in a text to which there are many contributors, the volume of material reflects the interest of the contributor and not necessarily the contribution to the total perspective.

There are several chapters concerned with anesthesia for special organ systems. For example, there are chapters on anesthesia for abdominal surgery, neurological surgery, pediatric surgery, etc. The reviewer admits to a distinct bias, but in a large two-volume text, it seems that fundamental principles could be sufficiently well established to make it unnecessary to detail the management of anesthesia in all except a few special circumstances.

The reviewer does not want to create the impression that the text is unworthy. The contributors are of high quality, the authors are exceedingly well qualified to prepare a text,

the material is well written (for the most part), the print is easily read, the illustrations are liberal and excellently reproduced and there is good organization of the material within the text. For those who are looking for a text that will be a single source for much background information as well as anesthetic practice itself, this text is certainly worthy and will undoubtedly serve as a convenient single reference source for many questions. The bibliography for many of the chapters is extensive, pertinent and current.

STUART C. CULLEN, M.D.

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INSTRUCTIONAL COURSE LECTURES—Volume 18, 1960—The American Academy of Orthopedic Surgeons. Fred C. Reynolds, M.D., St. Louis, Missouri, Editor. The C. V. Mosby Company, 3207 Washington Blvd., St. Louis 3, Missouri, 1960. 421 pages, \$18.50.

For the past 17 years the American Academy of Orthopedic Surgeons, through its Instructional Course Committee currently headed by Dr. Reynolds, has published selected papers from a yearly series of educational lectures given at the time of its annual meeting for the benefit of practicing orthopedists throughout the country who desire review of specialized subjects within the fields of orthopedics.

The previous volumes have been enthusiastically received and this should be no exception. The current publication contains many excellent subject reviews which should appeal to even the most sophisticated reader. The book itself, prepared by the Mosby Company, is handsome enough, beautifully illustrated and attractively got-up in large format paper.

The contents are divided into five major headings: Fractures, bone graft surgery, children's orthopedics, disability evaluation and athletic injuries. Of these the section on children's orthopedics is easily the most notable with comprehensive discussions by Green on control of bone growth, Blount on unequal leg length, and Aitken on the child amputee. Of the remaining portion, several papers will be of value to resident surgeons in training and for review by practicing surgeons. Fractures of the elbow in children by Fahey, principles of bone graft surgery by Herndon and surgical approaches to the cervical spine by Robinson are notable.

A volume of this sort attracts little that is new or controversial. There has been added this year, however, a series of two papers on diagnosis, treatment and prognosis of vascular injuries in the extremities which clearly and concisely reviews statistics of extremity survival and technique for arterial repair.

Controversially, a difference of opinion is pointed up in the section on disability evaluation where Bateman, Eaton and Kessler, backing the stand taken by the Committee of Medical Rating of Physical Impairment of the A.M.A., recommend that disability evaluation by physicians be limited to a description of physical impairment, while McBride feels that medical authorities should be qualified to assess both physical impairment and the more shadowy factors of motivation, constitutional reaction to injury and job adaptability which in sum total make up "disability." This divergence of thought regarding the right of the physicians to go beyond the field of medicine has ethical implications not easily resolved. It is hoped that the academy will be able to help clarify the role of the orthopedist in disability evaluation.

This effective review will be of permanent value to any hospital library associated with an orthopedic residency program and of considerable value to any practicing surgeon who does not have ready access to such a library. It will be of limited value to physicians outside the field of orthopedic surgery.

EDWARD H. WILSON, M.D.

CARDIOVASCULAR DYNAMICS—Second Edition— Robert F. Rushmer, M.D., Professor of Physiology and Biophysics, University of Washington Medical School. W. B. Saunders Company, West Washington Square, Philadelphia 5, Pa., 1961. 503 pages, \$12.50.

The second edition of Rushmer's excellent book brings together under a new and more appropriate title much of the basic physiology and biophysics essential to understanding cardiovascular disease. Despite the change in title, the character of the book remains the same and the most notable changes have been the expansion and reorganization of various sections to include newer information. This is especially apparent in the sections on cardiac output and peripheral vascular control and undoubtedly reflects the author's area of primary interest.

The book is replete with many clear and pertinent diagrams which greatly clarify the subject matter. Specific reference in the text to published reviews of various aspects of the subject is of considerable value to the reader who wishes to pursue the subject more deeply. The section on electrophysiology is well done and adds to the completeness of the book. Relatively little attention has been given to the dynamic aspects of congenital heart disease and the physiological basis of cardiac therapy; this is especially notable in the light of the considerable developments that have taken place in this area since the last edition of the book.

One minor criticism is that the bibliography is relatively incomplete if the author's own work is eliminated.

The book is very readable, clear and thought-provoking. It is only slightly larger than the first edition and is highly recommended to physicians who wish to understand the fundamental bases for the modern concepts of cardiovascular disease.

MAURICE SOKOLOW, M.D.

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NEURORADIOLOGY WORKSHOP—Volume 1—Scalp, Skull and Meninges—Leo M. Davidoff, M.D., Active Consultant Neurosurgeon, Montefiore Hospital; Professor and Chairman, Department of Neurosurgery, Albert Einstein College of Medicine, Yeshiva University, New York; Harold G. Jacobson, M.D., Chief, Division of Diagnostic Radiology, Montefiore Hospital; Professor of Clinical Radiology, New York University School of Medicine, New York; and Harry M. Zimmerman, M.D., Chief, Division of Laboratories, Montefiore Hospital; Professor of Pathology, College of Physicians and Surgeons, Columbia University, New York. Grune & Stratton, Inc., 381 Park Avenue South, New York 16, N. Y., 1961. 256 pages, \$16.50.

This monograph is somewhat of a departure from conventional texts. It consists essentially of the edited reports of the weekly conference of the neurology and neurosurgery staffs held in the department of radiology at the Montefiore Hospital. The dramatis personae include the chiefs of neurosurgery, radiology, pathology and neurology at that and at some of its associated institutions.

Following an excellent introduction which deals with contrast studies of central nervous system structures, there is a brief chapter on craniocerebral tumors, and then two long chapters dealing with a series of case reports, adequately illustrated and discussed.

There are fourteen case reports of lesions of the scalp and skull, and twenty-eight case reports of meningiomas.

There is one paragraph in the introduction which bears reprinting in full: "There is an unhappy tendency nowadays when pneumoencephalography, angiography and myelography are so easily available, to overlook the very valuable contributions toward diagnosis that can be made by a careful study of the plain roentgenograms of the skull and spine. It is easy to fall into such practices, and even when for the sake of completeness plain roentgenographic studies are made preliminary to special investigations, the plain

films are sometimes not interpreted or the report is not yet available to the clinician before he goes ahead with more definitive studies. We would very strongly urge against this practice and, except in emergencies, would recommend that appropriate views, including stereoscopic studies, be made and meticulously reviewed before further investigation is undertaken. If this is done, it is safe to say that in a considerable number of cases, further studies with contrast media may become unnecessary or, if still desirable, may prove confirmatory of diagnoses arrived at through examination of the plain roentgenograms."

The authors then go on to emphasize that in the United States the plain film studies are best made by standard stereoscopic PA, AP, lateral and occipital views of the skull. Under special circumstances these studies are augmented by such additional views as are indicated. However, the standard set of four stereoscopic pairs is recommended as a preliminary in all brain tumor suspects. With this your reviewer heartily agrees.

There is an entertaining section on the matter of "Radiological and clinical correlations." Since a good radiologist is also a clinician, the terms are not well met. What the authors mean is "Should radiological clinicians and bedside clinicians consult on these cases?" The answer obviously is "Yes." The general radiologist can maintain a competent degree of skill in the interpretation of a majority of central nervous system lesions suitable for radiologic study. There is of course, a good place for a specialist in neuroradiology in very large centers, but the preferred arrangement for the majority of hospitals and communities in this country is unquestionably one in which the general radiologist consults with the neurologist or neurosurgeon in the matter at hand.

The illustrations are, fortunately, in negative form, similar to the original roentgenograms. However, many have been "doctored" by the method known as logelectronics. This tends to increase the contrast to an undesirable degree and, at least in some instances, to decrease the detail. The text is clear and there is a brief index. References are kept to a minimum.

L. H. GARLAND, M.D.

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THE CHOICE OF A MEDICAL CAREER—Essays on the Fields of Medicine, edited by Joseph Garland, M.D. SC.D. (HON.), editor, New England Journal of Medicine; Consultant Editor, British Practitioner; and Joseph Stokes III, M.D., Associate in Preventive Medicine, Harvard Medical School; Associate Editor, New England Journal of Medicine. J. B. Lippincott Company, East Washington Square, Philadelphia 5, Pennsylvania, 1961. 231 pages, \$5.00.

This series of excellent articles on "The Choice of a Medical Career" by prominent men in American medicine really adds little to what has often been said. The controversy about basic science vs. "clinical" medicine, the art of practice and the patient as a person are frequently touched on by the various essayists, and the advantages of the different branches of medicine are supported by specialists in each field. Everyone seems a little bit on the defensive about the "practice" of medicine, as he may well be, these days, when the pendulum has swung far to one side and the "basic scientists" in medical schools are in the saddle. Few any longer seem to accept the view that both fundamental scientists and clinicians with a wide experience of disease and a knowledge of how to handle people can co-exist to advantage in a medical school, and both serve a useful purpose. *Delenda est Carthago.*

This little book can however certainly be read to advantage by prospective medical students; it contains much wisdom and not a little interesting historical material.

ARTHUR L. BLOOMFIELD, M.D.

PSYCHOTHERAPISTS IN ACTION—Exploration of the Therapist's Contribution to the Treatment Process—Hans H. Strupp, Department of Psychiatry, School of Medicine, University of North Carolina, Chapel Hill. Grune & Stratton, Inc., 381 Park Avenue South, New York 16, N. Y., 1960. 338 pages, \$8.75.

The book describes in detail a study of the psychotherapeutic process with particular emphasis on the operations of the psychotherapist. Strupp, using a sound film of an initial interview with a patient, obtained responses from 237 psychotherapists of markedly varying training and experience. Their attitudes toward the patient, their diagnoses, their suggestions for dealing with the material in the interview, their interpretations, their understanding of the dynamics of the case and their goals of treatment were obtained by the use of a questionnaire. An analysis of the therapeutic techniques recommended was made in relation to the therapist's personality, training and experience.

The process by which the therapist arrives at his clinical judgments and evaluations about a patient is explored and related to specific treatment recommendations and planning. The varying ways in which different therapists are influenced by a particular patient is clearly shown, as is the effect this has on his ideas about the type of therapeutic relationship he would plan to evolve.

The author is aware of the limitations of his method of investigating the psychotherapeutic process, but obtained sufficient data to support the already generally accepted thesis that therapists cannot be treated as interchangeable units with techniques and practices that are roughly identical. There is tremendous difference between therapists, and these differences play significant roles in both the goals and techniques (and results) of therapy.

The book will be of interest to those who are interested in a careful examination of psychotherapy. The method of investigation employed represents a distinct contribution.

NORMAN Q. BRILL, M.D.

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MEDICINE AS AN ART AND A SCIENCE—A. E. Clark-Kennedy, M.A., M.D. (Cantab.), F.R.C.P. (London), Fellow of Corpus Christi College, Cambridge, Consulting Physician to the London Hospital and formerly Dean of the Medical School; and C. W. Bartley, M.A., D.M. (Oxon.), M.D. (McGill), M.R.C.P. (London), Physician to the Lambeth Hospital. J. B. Lippincott Company, East Washington Square, Philadelphia 5, Pennsylvania, 1960. 425 pages, \$6.25.

A. E. Clark-Kennedy has been concerned with the interrelationships of the art and science of medicine for a long time. In 1947 his book entitled "Medicine" examined all phases of the subject and gave the reasons and the reasonings for his belief that a true physician must treat the soul as well as the body of his patient. The present volume, published jointly with T. W. Bartley and entitled "Medicine as an Art and a Science" pursues this thesis further.

This is not a textbook but a relatively short volume, directed primarily towards the needs of the beginner, which one can read without too much mental indigestion. It may serve as a guide to more detailed and comprehensive textbooks in their different fields. The approach is based on the incontrovertible and yet neglected fact that diseases are not things which exist independent from the patient who suffers from them, but are transient or progressive alterations in individual men, women and children. (All diseases must be due to reactions between an individual and his environment but we talk about diseases as if they exist per se.) The authors have attempted to paint in outline the whole picture of the natural phenomena of human disease in the hope of building a sense of perspective essential to the physician.

The presentation is in five parts: (1) The patient and his disease; (2) Primary functional disorders; (3) Organic

disease; (4) Clinical diagnosis; (5) Principles of prevention and treatment. The reviewer wonders at such things as the odd lumping together of most metabolic and endocrine conditions under "unexplained disorders of physical function" and the advocacy of antibiotic therapy without a preceding culture, but he feels that the authors have done a generally good job.

This is an interesting book which emphasizes for the student or physician fundamental truths which are sometimes too easily forgotten. It is recommended to both as ancillary reading.

EDGAR WAYBURN, M.D.

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IMPROVING PATTERNS OF LANGUAGE USAGE—Ruth I. Golden, English Department, Detroit Central High School. Wayne State University Press, Detroit 2, Michigan, 1960. 196 pages, \$2.95.

This is a report on intensive research into language of three high schools in Detroit with a school population which consists predominantly of Negro students. The standard of language expression is analyzed in relation to the socio-economic level of the students. The progress of this level depends on more widely accepted speech patterns. To be accepted by middle-class standards language has to be regarded as a key to that acceptance.

With the increasing Negro population in California this problem besides being of great social importance is of special interest to the physician who handles health problems of Negroes. The pattern of nonstandard expressions still used by so many high school students gives the false impression of ignorance and lends support to prejudice. Instead one has to keep in mind that Negro English contains archaic survivals of good old English. This book describes how people more or less isolated from the central development always retain cultural characteristics that the main body loses. Tennessee mountaineers were geographically, Negroes more socially isolated. Since there is no biological basis for "Negro dialect," Negroes are as capable of pronouncing English words as whites are.

Many Negro students use a "second language" to which they revert as soon as they are out of the classroom. This more comfortable common language they share as compensation for injustices. Lack of speech proficiency contributes to the failure of many Negro students to enter college. The resulting frustration does not contribute to better human relations. The results of this research are of great importance for the interpretation of oral communication with Negro patients in psychiatry and psychology.

PAUL J. MOSES, M.D.

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HOUSE OF HEALING—The Story of the Hospital—Mary Risley. Doubleday & Company, Inc., 575 Madison Avenue, New York 22, N. Y., 1961. 288 pages, \$4.50.

This 288-page book, written for the layman, traces the evolution of the hospital from the early temples of healing to the present modern hospital medical centers. The practice of medicine in ancient Sumer and Babylon, Egypt, Greece, Rome, and Arabia are portrayed. The development of the Monastic hospitals, the various patrons of hospitals, and the role of cities and governments in hospitals are discussed. The book concludes with chapters on the development of hospitals in the United States and the future role of hospitals. The index appears to be quite adequate. The continuity of thought is occasionally disrupted by incorporation of interesting facets of history not directly correlated to the subject matter. This book will contribute but little to the busy physician's library.

AIR WE BREATHE, THE—A Study of Man and His Environment—Edited by Seymour M. Farber, M.D., Chief, University of California Tuberculosis and Chest Service, San Francisco General Hospital; Assistant Dean, Department of Continuing Education in Medicine and the Health Sciences, University of California School of Medicine and University Extension, San Francisco, California; and Roger H. L. Wilson, M.D., Assistant Clinical Professor of Medicine; Assistant Head, Medical Extension, University of California School of Medicine and University Extension, San Francisco, California. In collaboration with John R. Goldsmith, M.D., and Mello Pace, Ph.D., members of the Program Committee. Charles C. Thomas, Publisher, 301-327 East Lawrence Avenue, Springfield, Ill., 1961. 414 pages, \$14.00.

"The Air We Breathe" is the enticing title of a collection of papers presented at a symposium at the University of California Medical School Center in San Francisco. It should interest the practicing physician, those of many disciplines of science and most of all laymen concerned with the air we breathe. Because of the wide gamut of information and the variety of the subject matter presented, it is to be doubted if any one person is sufficiently knowledgeable in all facets of this subject to be a completely capable reviewer. The undersigned is not so endowed.

In addition to the aforementioned editors and collaborators, 27 internationally recognized contributors aid in this comprehensive multidisciplinary effort. The book is divided into the following four sections: (1) The normal atmosphere and its variations; (2) The air pollution problem of industry; (3) Urban living and air pollution, smog and fog; and (4) Specific problems, such as "The effect of dust on the human lung" and "environment and cancer."

The first six chapters of Section I are highly scientific, dealing with the dynamic nature of the atmosphere, with stress and human action, with factors of capsule climates, that is, underseas and space and man in his normal atmosphere. The final chapter of this section is a delightful, easily read discussion on "man made maladies." The author of this chapter introduces his subject with the statement—"although we are specially interested in maladies of medical interest, there are also maladies of economic interest and the two are interconnected."

Chapter 8 of Section II deals with factors concerned with the particle size of dust, its inhalation and retention within the lungs or its clearance.

Chapter 9—"The immediate and long-term effects of chemical irritants on man" holds special interest for this reviewer. Limitation of space forbids the length of discussion it deserves. The opening portion of this chapter complements the preceding chapter in regard to factors of inhalation. Nine tables are used as ancillary to the content of the text. All are excellent and illuminating. However, Tables 6 and 7 may be misleading unless attention is paid to the script. The tendency of a few investigators to relate a chemical exposure to pulmonary cancer demands the ultimate in clinical judgment and especially the application of "clinical epidemiology" so ably presented at the conclusion of this chapter.

The curious, inquiring and apprehensive mind of physicians and laymen alike will find some answers to the effects of airborne radiation. Even though presented with scientific terminology, it is not beyond the ken of the untutored in this field.

Section III presents the disaster potential of community air pollution, the automobile and smog, the failure in metropolitan planning and a panel discussion on what we can do to make our cities more habitable. This portion of the

book provides valuable information for those areas of the United States only recently realizing that the smog problem is not confined to southern California.

The final chapters of this book are devoted to "specific problems" involving physiological and biological factors of air pollution and "lung cancer." The chapter on "smoking in relation to lung cancer" is provocative.

To assume that "The Air We Breathe" is just another run of the mill discussion on smog would be erroneous. This reviewer believes that there has been no other book written on this subject that is so complete as well as so basic in facts. Doctors Seymour M. Farber and Roger H. L. Wilson are to be congratulated on the arrangement of this symposium as well as the editing of this valuable volume.

R. T. JOHNSTONE, M.D.

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HEART SOUNDS AND MURMURS—A Clinical and Phonocardiographic Study—P. A. Ongley, Consultant in Pediatrics, Mayo Clinic, Rochester, Minnesota; Howard B. Sprague, Board of Consultation, Massachusetts General Hospital; M. B. Rappaport, Former Head of Department of Electrophysiologic Research, Sanborn Company, Waltham, Massachusetts; and A. S. Nadas, Cardiologist, Children's Hospital, Boston, Massachusetts. Grune & Stratton, Inc., 381 Park Avenue South, New York 16, N. Y., 1960. 360 pages, \$9.75.

This monograph is a very good, up-to-date account of the important subject of heart sounds and murmurs written by experts in pediatric and adult cardiology, as well as by an electrophysicist. The book begins with an excellent history of the important contributions to clinical auscultation, a history of the stethoscope and a very good account of the human ear in auscultation and the physical principles which permit the reader to understand phonocardiography. The relationships among electrocardiography, apex cardiograms and the venous pulse in orientation of phonocardiograms are most helpful.

The authors then proceed with sections on the normal heart sounds, gallop rhythms, splitting of heart sounds, systolic and diastolic murmurs and individual valvular abnormalities. The volume closes with short chapters on various congenital cardiac defects, and the arrhythmias.

In general the text is well done and reflects modern concepts of the mechanisms and clinical value of auscultatory findings. The physiological correlations could be expanded, but probably were kept within bounds deliberately. The bibliography is particularly complete with respect to the early historical research; it is less complete with respect to later studies during the last two to seven years, especially with regard to the English papers, notably those of Wood, Leatham, Mounsey, Bridgen, as well as the South African workers, Vogelpoel and Schrire. The bibliography on the congenital defects is quite scanty.

The major defects were few, one being the relatively poor illustrations of the cardiac murmurs. This defect is sometimes due to the original, but may be in the reproduction. The account of mitral and tricuspid insufficiency is relatively limited and the important work of Shillingford is not mentioned, particularly with respect to the confusion which may result between insufficiency of these two valves.

In general the defects are minor and the book can be highly recommended to the practicing physician as an authoritative, contemporary work on heart sounds and murmurs with one of the best accounts of the physical and acoustical principles involved.

MAURICE SOKOLOW, M.D.